

BOSTONIENSIS

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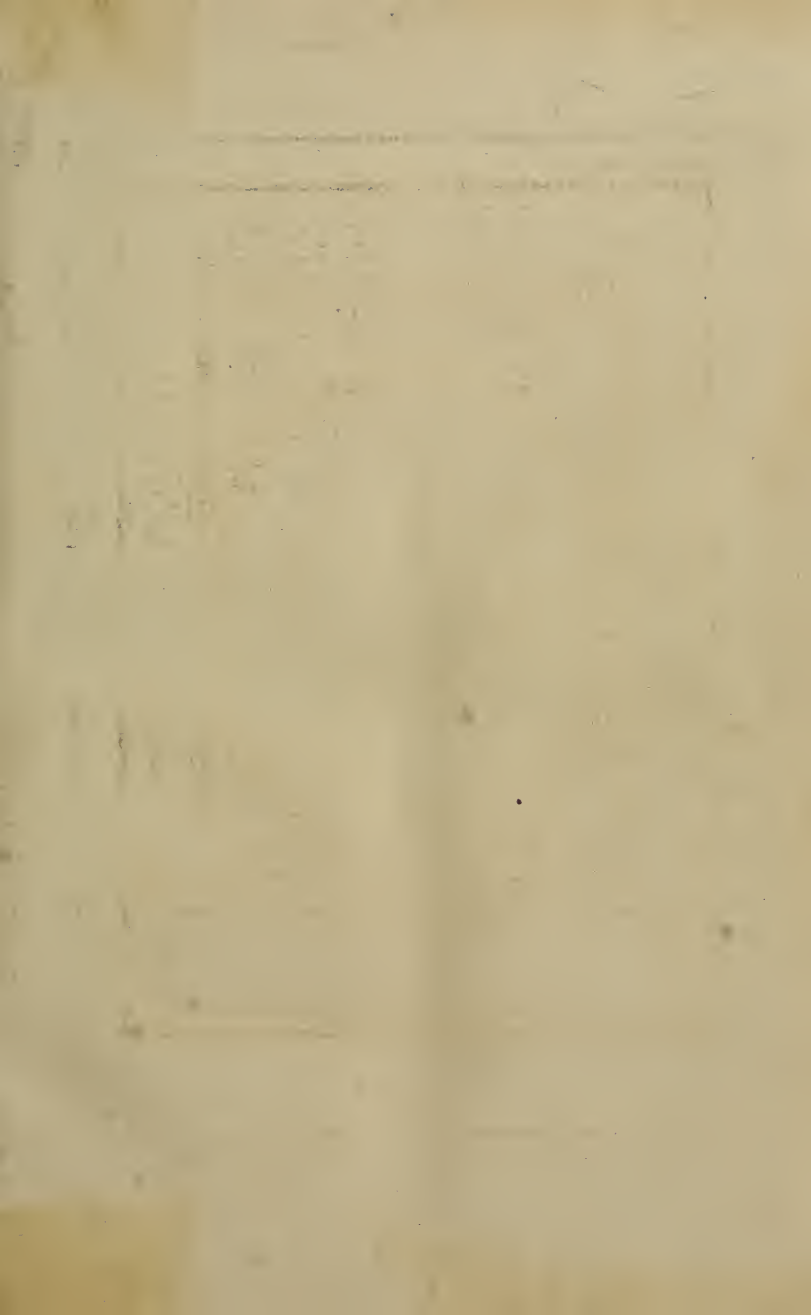


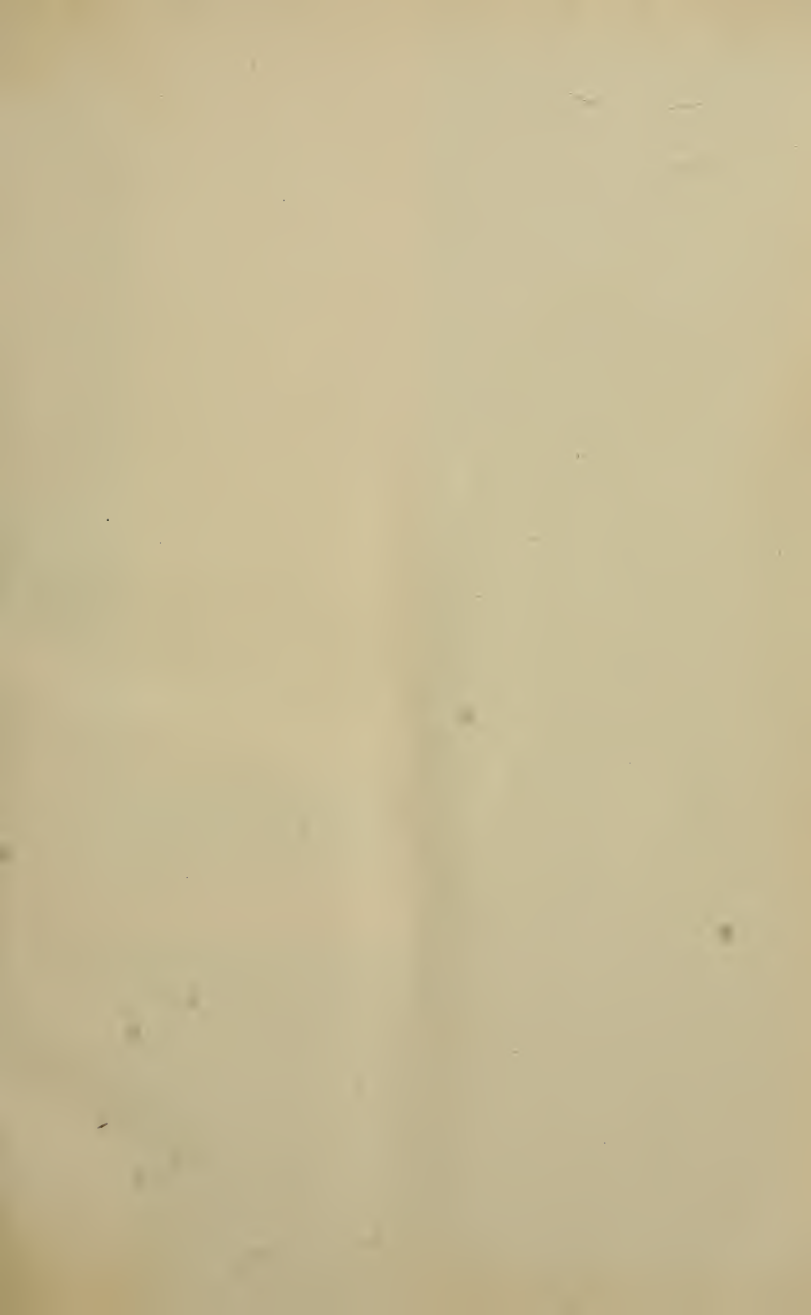
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ONE HUNDRED AND ELEVENTH

ANNUAL CATALOGUE

OF THE

MEDICAL SCHOOL (BOSTON)

OF

HARVARD UNIVERSITY.

1893-94.

[Reprinted from the Catalogue of the University.]



CAMBRIDGE:

Published by the University.

1893.

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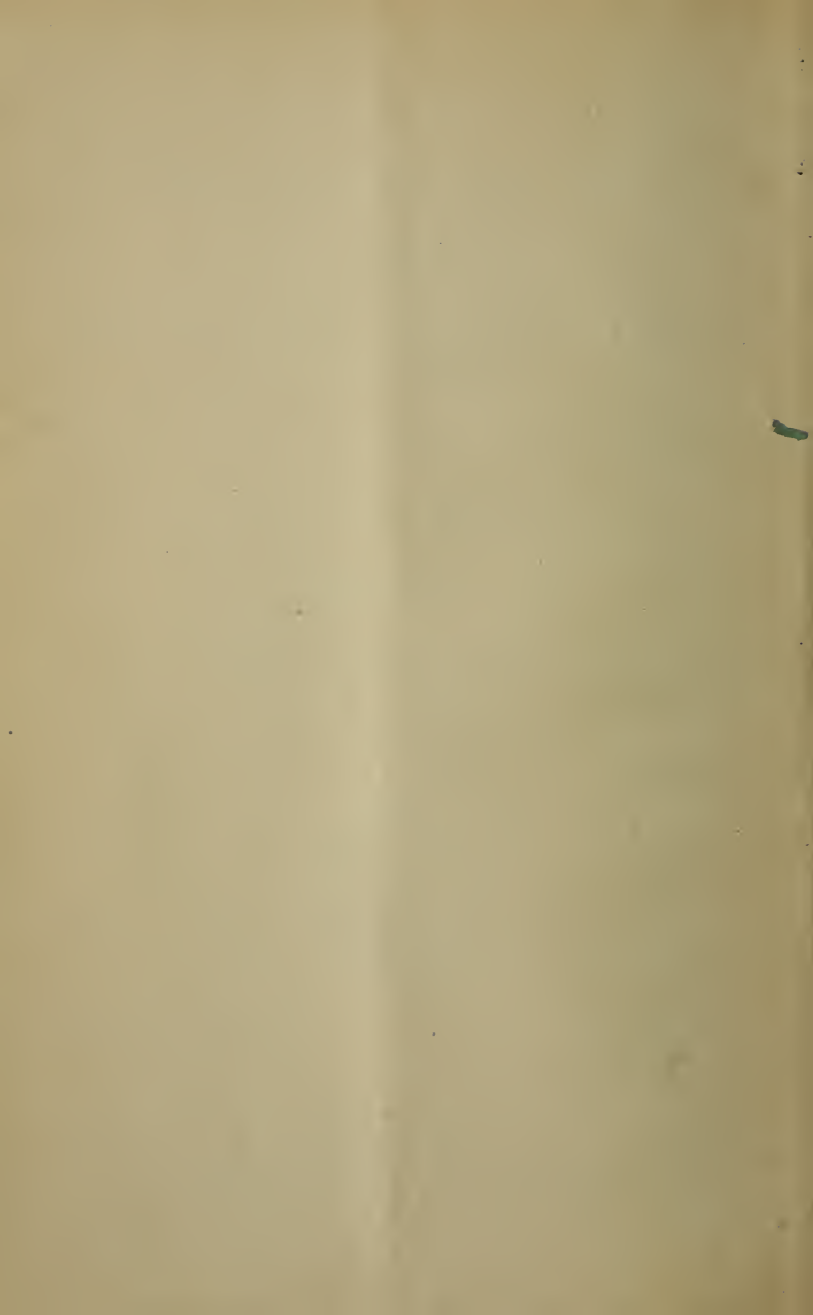
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THE MEDICAL SCHOOL.

BOSTON.

Instruction in this School is given by lectures, recitations, clinical teaching, and practical exercises, uniformly distributed throughout the academic year. The year begins on the Thursday following the last Wednesday in September,* and ends on the last Wednesday in June. There is a recess at Christmas, beginning December 23, and ending January 2; and a spring recess, beginning on the Wednesday before Fast Day, and ending on the following Tuesday, inclusive.

The course of instruction has been greatly enlarged, and is so arranged as to carry the student progressively and systematically from one subject to another, in a just and natural order.

In the subjects of anatomy, histology, chemistry, and pathological anatomy, laboratory-work is substituted for, or added to, the usual didactic lectures, and is as much required of every student as attendance at lectures and recitations.

At the beginning of the academic year 1892-93 a graded course covering four years was established as the required course of study. The degree of Doctor of Medicine *cum laude* will be given to candidates who have pursued a complete four years' course, and obtained an average of over 75 per cent in all the examinations of this course.

Instead of the customary oral examination for the degree of Doctor of Medicine, held at the end of the period of study, a series of written and oral examinations on all the main subjects of medical instruction has been distributed for regular students through their entire course of study. Every candidate for the degree must pass a satisfactory examination in every one of the principal departments of medical instruction, at some time during the period of study.

* That the time of study shall count as a full term, students of every class must present themselves within the first week of the term and register their names with the Secretary.

1893.

JULY.

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AUGUST.

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SEPTEMBER.

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OCTOBER.

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1894.

JANUARY.

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JULY.

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AUGUST.

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SEPTEMBER.

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OCTOBER.

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DECEMBER.

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CALENDAR.



The meetings of the PRESIDENT AND FELLOWS are held on the second and on the last Monday of every month.

1893.

- Sept. 28, Thursday.* **Academic Year begins** in all departments of the University.
- Sept. 28, Thursday.* Examinations for admission to the Law School.
- Sept. 28, 29, Thursday and Friday.* Examinations for admission to advanced standing in the Law School.
- Oct. 11, Wednesday.* Stated Meeting of the Board of Overseers.
- Oct. 31, Tuesday.* Last day for receiving applications of Candidates for Final Honors in 1894.
- Nov. 1, Wednesday.* Last day for receiving dissertations for the Bowdoin Prizes.
- Nov. 30, Thursday.* Thanksgiving day; a holiday.
- Dec. 1, Friday.* Last day for receiving applications for aid from the Loan Fund.
- Dec. 15, Friday.* Last day for receiving from first-year Students applications for Price Greenleaf Aid.

RECESS FROM DEC. 23, 1893, TO JAN. 2, 1894, INCLUSIVE.

1894.

- Jan. 10, Wednesday.* Stated Meeting of the Board of Overseers.
- Feb. 1, Thursday.* Second half-year begins in the Medical School.
- Feb. 12, Monday.* **Second half-year begins** (except in the Medical School).
- Feb. 22, Thursday.* Washington's Birthday; a holiday.
- March 1, Thursday.* Last day for receiving applications of candidates for Final Honors in Natural History in 1895.
- March 31, Saturday.* Last day for receiving applications for all Graduate Fellowships and Scholarships, and for College Scholarships to be assigned to Graduate Students.
- March 31, Saturday.* Last day for re-engaging College Rooms for 1894-95.
- March 31, Saturday.* Last day for receiving applications of candidates for Second-Year Honors.

April 4, Wednesday. Last day for receiving dissertations for the Boylston Medical Prizes.

RECESS FROM THE WEDNESDAY BEFORE FAST DAY TO THE FOLLOWING TUESDAY INCLUSIVE.

April 11, Wednesday. Stated Meeting of the Board of Overseers.
April 25, Wednesday. Last day for receiving names of competitors for the Boylston Prizes for Elocution.

April 30, Monday. Applications from Graduate Students for admission to examination for any degree should be made on or before this date.

May 1, Tuesday. Last day for receiving from persons intending to enter College applications for Price Greenleaf Aid for 1894-95.

May 1, Tuesday. Last day for receiving dissertations for the Dante, Sargent, Paine, Toppan, Sumner, and Sales Prizes.

May 1, Tuesday. Last day for receiving theses of Candidates for the degree of Ph.D. or S.D.

May 2, Wednesday. Last day for receiving applications for College Rooms for 1894-95.

May 4, Friday. Assignment of College Rooms for 1894-95.

May 10, Thursday. Speaking for the Boylston Prizes.

May 30, Wednesday. Memorial Day; a holiday.

May 30, Wednesday. Last day for receiving from undergraduates applications for College Scholarships, and for Price Greenleaf Aid for 1894-95.

June 4, Monday. Examinations in the Dental School begin.

June 6, Wednesday. Examinations in the Medical School begin.

June 22, Friday. Seniors' Class Day.

June 26, Tuesday. Examinations for admission to the Veterinary School.

June 26, 28, 29, 30, Tuesday to Saturday. Examinations for admission to Harvard College, and to the Lawrence Scientific School.

June 27, Wednesday. Commencement. Stated Meeting of the Board of Overseers.

SUMMER VACATION OF THIRTEEN WEEKS, FROM COMMENCEMENT DAY TO SEPTEMBER 27.

June 28, Thursday. Examinations for admission to the Law and Medical Schools.

<i>July 5, Thursday.</i>	Summer School opens.
<i>Sept. 24, Monday.</i>	Examinations in the Dental School begin.
<i>Sept. 20, 21, 22, 24, Thursday to Monday.</i>	Examinations for admission to Harvard College, and to the Lawrence Scientific School.
<i>Sept. 24, Monday.</i>	Examinations for admission to the Medical and Dental Schools.
<i>Sept. 24, Monday.</i>	Examinations in the Medical School begin.
<i>Sept. 25, Tuesday.</i>	Examinations for admission to the Veterinary School.
<i>Sept. 26, Wednesday.</i>	Annual Meeting of the Board of Overseers.
<i>Sept. 27, Thursday.</i>	Academic Year begins in all departments of the University.
<i>Sept. 27, Thursday.</i>	Examinations for admission to the Law School.
<i>Sept. 27, 28, Thursday and Friday.</i>	Examinations for admission to advanced standing in the Law School.
<i>Oct. 10, Wednesday.</i>	Stated Meeting of the Board of Overseers.
<i>Oct. 31, Wednesday.</i>	Last day for receiving applications of candidates for Final Honors in 1895.
<i>Nov. 1, Thursday.</i>	Last day for receiving dissertations for the Bowdoin Prizes.
<i>Dec. 1, Saturday.</i>	Last day for receiving applications for aid from the Loan Fund.

 ABBREVIATIONS.

C.	College House.	H'y.	Holworthy Hall.
Co.	Conant Hall.	M.	Matthews Hall.
D.	Divinity Hall.	P.	Perkins Hall.
D. H.	Divinity House.	S.	Stoughton Hall.
F.	Foxcroft House.	T.	Thayer Hall.
G.	Grays Hall.	W.	Weld Hall.
H.	Hollis Hall.	W. H.	Walter Hastings Hall.
H'ke.	Holyoke House.		

THE MEDICAL SCHOOL.

FACULTY.

- CHARLES W. ELIOT, LL.D., *President.*
WILLIAM L. RICHARDSON, M.D., *Dean, and Professor of Obstetrics.*
JAMES C. WHITE, M.D., *Professor of Dermatology.*
OLIVER F. WADSWORTH, M.D., *Professor of Ophthalmology.*
HENRY P. BOWDITCH, M.D., *Professor of Physiology.*
CLARENCE J. BLAKE, M.D., O.M., *Professor of Otology.*
FRANK W. DRAPER, M.D., *Professor of Legal Medicine.*
CHARLES B. PORTER, M.D., *Professor of Clinical Surgery.*
J. ORNE GREEN, M.D., *Clinical Professor of Otology.*
AMOS L. MASON, M.D., *Associate Professor of Clinical Medicine.*
J. COLLINS WARREN, M.D., *Professor of Surgery.*
REGINALD H. FITZ, M.D., *Hersey Professor of the Theory and
Practice of Physic.*
THOMAS DWIGHT, M.D., LL.D., *Parkman Professor of Anatomy.*
JAMES J. PUTNAM, M.D., *Professor of Diseases of the Nervous
System.*
EDWARD S. WOOD, M.D., *Professor of Chemistry.*
FREDERICK C. SHATTUCK, M.D., *Jackson Professor of Clinical
Medicine.*
WILLIAM H. BAKER, M.D., *Professor of Gynaecology.*
EDWARD H. BRADFORD, M.D., *Assistant Professor of Orthopedics.*
T. M. ROTCH, M.D., *Professor of the Diseases of Children.*
WILLIAM B. HILLS, M.D., *Associate Professor of Chemistry.*
WILLIAM F. WHITNEY, M.D., *Curator of the Anatomical Museum.*
WILLIAM T. COUNCILMAN, M.D., *Shattuck Professor of Patho-
logical Anatomy.*
CHARLES S. MINOT, S.D., *Professor of Histology and Human
Embryology.*
MAURICE H. RICHARDSON, M.D., *Assistant Professor of Anatomy.*
HAROLD C. ERNST, M.D., *Assistant Professor of Bacteriology.*
CHARLES HARRINGTON, M.D., *Instructor in Materia Medica and
Hygiene.*
WILLIAM T. PORTER, M.D., *Assistant Professor of Physiology.*
FRANKLIN DEXTER, M.D., *Demonstrator of Anatomy.*

OTHER INSTRUCTORS.

- THEODORE W. FISHER, M.D., *Lecturer on Mental Diseases.*
SAMUEL H. DURGIN, M.D., *Lecturer on Hygiene.*
HENRY P. QUINCY, M.D., *Instructor in Histology.*
JOHN H. McCOLLOM, M.D., *Assistant in Bacteriology.*
ELBRIDGE G. CUTLER, M.D., *Instructor in the Theory and Practice of Physic.*
FRANCIS H. DAVENPORT, M.D., *Instructor in Gynaecology.*
EDWARD M. BUCKINGHAM, M.D., *Instructor in Diseases of Children.*
ARTHUR T. CABOT, M.D., *Instructor in Genito-Urinary and Clinical Surgery.*
JOHN B. SWIFT, M.D., *Assistant in Gynaecology.*
JOHN W. ELLIOT, M.D., *Assistant in Clinical Surgery.*
WILLIAM W. GANNETT, M.D., *Instructor in Clinical Medicine.*
CHARLES M. GREEN, M.D., *Instructor in Obstetrics.*
CHARLES F. WITHINGTON, M.D., *Instructor in Clinical Medicines.*
VINCENT Y. BOWDITCH, M.D., *Assistant in Clinical Medicine.*
SAMUEL J. MIXTER, M.D., *Instructor in Surgery.*
GEORGE H. MONKS, M.D., *Assistant in Clinical and Operative Surgery.*
MYLES STANDISH, M.D., *Assistant in Ophthalmology.*
FRANCIS S. WATSON, M.D., *Assistant in Clinical and Genito-Urinary Surgery.*
HERBERT L. BURRELL, M.D., *Instructor in Clinical Surgery.*
FRANCIS B. HARRINGTON, M.D., *Assistant in Clinical Surgery.*
HERMAN F. VICKERY, M.D., *Instructor in Clinical Medicine.*
WILLIAM M. CONANT, M.D., *Instructor in Anatomy.*
HENRY JACKSON, M.D., *Assistant in Clinical Medicine and Demonstrator of Bacteriology.*
GEORGE G. SEARS, M.D., *Assistant in Clinical Medicine.*
JOHN C. MUNRO, M.D., *Assistant Demonstrator of Anatomy.*
EDWARD REYNOLDS, M.D., *Assistant in Obstetrics.*
CHARLES W. TOWNSEND, M.D., *Assistant in Obstetrics.*
CHARLES L. SCUDDER, M.D., *Assistant in Clinical Surgery, and Demonstrator of Surgical Apparatus.*
ARTHUR K. STONE, M.D., *Assistant in Bacteriology.*
BENJAMIN TENNEY, M.D., *Assistant in Anatomy.*
CHARLES P. WORCESTER, M.D., *Assistant in Chemistry, and Secretary of the Medical Faculty.*
WILLIAM S. BRYANT, M.D., *Assistant in Otolaryngology.*
EDWARD M. GREENE, M.D., *Assistant in Histology.*
ARTHUR P. CHADBOURNE, M.D., *Demonstrator of Experimental Therapeutics and Pharmacology.*

WILLIAM H. PRESCOTT, M.D., *Assistant in Pathology.*
 ALEXANDER BURR, M.D.V., *Assistant in Bacteriology.*
 JOHN L. AMES, M.D., *Assistant in Histology.*
 WILLIAM A. BROOKS, M.D., *Assistant in Anatomy.*
 EDWIN W. DWIGHT, M.D., *Assistant in Pathology.*
 ARTHUR H. WENTWORTH, M.D., *Assistant in Diseases of Children.*
 FREDERICK A. DAVIS, M.D., *Instructor in Physiology.*
 CHARLES A. PORTER, M.D., *Assistant in Anatomy.*
 EDWARD W. TAYLOR, M.D., *Assistant in Pathology.*
 JAY B. OGDEN, M.D., *Assistant in Chemistry.*
 JAMES H. WRIGHT, M.D., *Assistant in Pathology.*

The following gentlemen will give special clinical instruction :—

JOHN HOMANS, M.D., *in the Diagnosis and Treatment of Ovarian Tumors.*
 EDWARD COWLES, M.D., *in Mental Diseases.*
 FRANCIS B. GREENOUGH, M.D., and ABNER POST, M.D., *in Syphilis.*
 GEORGE W. GAY, M.D., *in Surgery.*
 GEORGE L. WALTON, M.D., and PHILIP C. KNAPP, M.D., *in Diseases of the Nervous System.*
 FREDERIC E. CHENEY, M.D., *in Ophthalmoscopy.*
 GEORGE WASHBURN, M.D., and WALTER L. BURRAGE, M.D., *in Gynaecology.*
 THOMAS A. DE BLOIS, M.D., JOHN W. FARLOW, M.D., and ALGERNON COOLIDGE, JR., M.D., *in Laryngology.*

STANDING COMMITTEES.

Executive Committee.—Dean, Drs. WHITE, BOWDITCH, SHATTUCK, HARRINGTON.

Advertising and Catalogue.—Drs. WOOD, FITZ, WHITNEY.

Admission Examinations.—Drs. WADSWORTH, ROTCH, HILLS, WHITNEY, ERNST, HARRINGTON.

Course of Study.—Drs. FITZ, BOWDITCH, DRAPER, MASON, WARREN, W. L. RICHARDSON, DWIGHT.

Nominations.—Drs. DRAPER, GREEN, PUTNAM, SHATTUCK, M. H. RICHARDSON.

Building.—Drs. BOWDITCH, WOOD, WHITNEY.

Library.—Drs. BOWDITCH, FITZ, DWIGHT, WOOD, BRADFORD, HILLS, MINOT.

Graduate Courses.—Drs. BLAKE, WADSWORTH, BRADFORD, ROTCH, MINOT.

Summer Courses.—Drs. DRAPER, FITZ, M. H. RICHARDSON.

STUDENTS.

IN COURSES FOR GRADUATES.

1892-93.*

Andrews, Brainard Alger, M.D.	<i>Boston.</i>
Austin, Arthur Everett, M.D.	<i>Boston.</i>
Ball, Charles, M.D.	<i>Boston.</i>
Bowles, George Hall, M.D.	<i>Boston.</i>
Burrage, Walter Lincoln, M.D.	<i>Boston.</i>
Channing, Walter, M.D.	<i>Boston.</i>
Cobb, Frederic Codman, M.D.	<i>Boston.</i>
Conroy, Peter John, M.D.	<i>Everett.</i>
Cook, Charles Henry, M.D.	<i>Natick.</i>
Craigin, George Arthur, M.D.	<i>Boston.</i>
Cutler, Edward Rowland, M.D.	<i>Waltham.</i>
Davis, Abel Albert, M.D.	<i>Boston.</i>
Drury, Alfred, M.D.	<i>Canton, N. Y.</i>
Faulkner, Herbert Kimball, M.D.	<i>Keene, N. H.</i>
Forster, Edward Jacob, M.D.	<i>Boston.</i>
Galloupe, Charles William, M.D.	<i>Boston.</i>
Gerry, Edwin Peabody, M.D.	<i>Boston.</i>
Hall, William Dudley, M.D.	<i>Boston.</i>
Harding, William Mitchell, M.D.	<i>Boston.</i>
Haven, George, M.D.	<i>Boston.</i>
Hewins, Parke Woodbury, M.D.	<i>Taunton.</i>
Howes, Pitts, M.D.	<i>Boston.</i>
McCollom, John Hildreth, M.D.	<i>Boston.</i>
Morrison, William Alexander, M.D.	<i>E. Boston.</i>
Nickerson, Asa Harden, M.D.	<i>Central Falls, R. I.</i>
Palmer, Lewis Merritt, M.D.	<i>So. Framingham.</i>
Ruppel, Emil Fraser, M.D.	<i>Boston.</i>
Ryan, Philip Marcellus, M.D.	<i>Boston.</i>
Storer, Malcolm, M.D.	<i>Boston.</i>
Sylvester, William Hillman, M.D.	<i>Natick.</i>
Washburn, George Hamlin, M.D.	<i>Boston.</i>
Webber, Samuel Gilbert, M.D.	<i>Boston.</i>
Worcester, Alfred, M.D.	<i>Waltham.</i>

* After the issue of the Catalogue.

1893-94.

Bartol, John Washburn, M.D.	<i>Boston.</i>
Cain, Willie George, M.D.	<i>Marlboro' N. H.</i>
Dewey, Charles Gipson, M.D.	<i>Somerville.</i>
Dillon, Thomas Joseph, M.D.	<i>Boston.</i>
Edwards, Thomas Alvin, M.D.	<i>Denver, Col.</i>
Fillebrown, Charles Dalton, M.D.	<i>Boston.</i>
Gage, James Arthur, M.D.	<i>Lowell.</i>
Galloupe, Benjamin Franklin, M.D.	<i>Hyde Park.</i>
Gerry, Edwin Peabody, M.D.	<i>Jamaica Plain.</i>
Homer, John, M.D.	<i>Newburyport.</i>
Houghton, Silas Arnold, M.D.	<i>Brookline.</i>
Hubbard, Frank Allen, M.D.	<i>Taunton.</i>
Jones, Claude Perry, M.D.	<i>Boston.</i>
Knight, Augustus Smith, M.D.	<i>Boston.</i>
Lancaster, Walter Brackett, M.D.	<i>Wellesley Hills.</i>
Lewis, Arthur Cathbert, M.D.	<i>Fall River.</i>
Manchester, Delos Burd, M.D.	<i>Beverly.</i>
Nason, Osmon Cleander Baker, M.D.	<i>Reading.</i>
Nickerson, George Wheaton, M.D.	<i>Stoneham.</i>
Richardson, Mark Wyman,	<i>Boston.</i>
Sharp, Walter Nevin, M.D.	<i>Saxonville.</i>
Sprague, John Lovell, Jr., M.D.	<i>Providence, R. I.</i>
St. Clair, Austin Emery, M.D.	<i>Boston.</i>
Steese, Edwin Sturtevant, M.D.,	<i>Brookline.</i>
Wilder, Raymond Sargent, M.D.	<i>Cambridge.</i>
Wood, Marshall William, M.D.	<i>Boston.</i>

FOURTH CLASS.

Barney, George Lawrence, A.B. 1890,	<i>Boston.</i>
Bennett, Frederick Sherwin,	<i>Boston.</i>
Billings, William Chester,	<i>Springfield.</i>
Boynton, Edwin Dana,	<i>Harrington, Me.</i>
Carleton, Ralph,	<i>Norwich, Conn.</i>
Cotton, Frederic Jay, A.B. 1890,	<i>Newport, R. I.</i>
Darling, Eugene Abraham, A.B. 1890,	<i>Troy, N. Y.</i>
Davenport, Charles Albert, A.B. 1890,	<i>Mt. Auburn.</i>
Dennett, John, Jr.	<i>York, Me.</i>
Dewis, John William,	<i>Boston.</i>
Duel, Arthur Baldwin,	<i>Granville, N. Y.</i>

Dunlap, Charles Bates, A.B. 1889,	<i>Greenville, W. Va.</i>
Erb, Theodore Charles,	<i>Boston.</i>
Ewald, Carl Adolf, A.B. 1888,	<i>Newton, N. J.</i>
Fairbanks, Arthur Willard,	<i>W. Roxbury.</i>
Farrington, Leander Morton,	<i>Portsmouth, N. H.</i>
Fuller, Frederick Henry,	<i>Rockland.</i>
Hall, Herbert James,	<i>Manchester, N. H.</i>
Henshaw, George Bridges, A.B. 1890,	<i>Cambridge.</i>
Hill, George Hillard,	<i>Worcester.</i>
Houghton, Henry Lincoln, s.B. (<i>Worcester Poly- tech. Inst.</i>) 1889,	<i>Worcester.</i>
Jenks, Harrison Darling, A.B. 1890,	<i>Warsaw, N. Y.</i>
Keenan, Herbert John,	<i>So. Boston.</i>
Lovewell, Henry Plummer, A.B. (<i>Brown Univ.</i>) 1889,	<i>Providence, R. I.</i>
Lyons, Joseph Benedict,	<i>Charlestown.</i>
McLeod, Percy DeMille,	<i>Boston.</i>
Moffitt, Herbert Charles, s.B. (<i>Univ. of Cali- fornia</i>) 1889,	<i>Oakland, Cal.</i>
Morse, Almon Gardner, A.B. 1890,	<i>Boston.</i>
Murphy, Charles Oscar,	<i>Boston.</i>
Page, Calvin Gates, A.B. 1890,	<i>Chestnut Hill.</i>
Reardon, Timothy Joseph,	<i>Charlestown.</i>
Selva, Julio, A.B. (<i>Nicaragua Coll.</i>) 1888,	<i>Leon, Nicaragua.</i>
Shaw, Albert Joel,	<i>Dorchester.</i>
Shaw, Arthur John,	<i>Dorchester.</i>
Starbird, Edward Perley,	<i>Boston.</i>
Stone, James Savage, A.B. 1889,	<i>Newton.</i>
Sweet, Charles Frederick,	<i>Central Falls, R. I.</i>
West, George Leon, A.B. 1890,	<i>Roslindale.</i>

THIRD CLASS.

Abbe, Frederick Randolph, A.B. (<i>Amherst Coll.</i>) 1891,	<i>Dorchester.</i>
Acton, Robert,	<i>Buffalo, N. Y.</i>
Adams, Charles Sumner,	<i>Penacook, N. H.</i>
Allen, William Howard, A.B. 1891,	<i>Mansfield.</i>
Baldwin, Herman Trost, A.B. 1891,	<i>Boston.</i>
Barney, Charles Norton,	<i>Boston.</i>
Batchelder, William Burdette,	<i>Lynn.</i>
Bateman, Frank Elliot, A.B. (<i>Tufts Coll.</i>) 1887,	<i>Charlestown.</i>
Bottomley, John Taylor, A.B. (<i>Holy Cross Coll.</i>) 1889,	<i>Lee.</i>

Boyle, Alfred John,	<i>Dorchester.</i>
Bragg, Frank Adelbert,	<i>Foxboro.</i>
Brown, Milton Douglas,	<i>Ruthville, Va.</i>
Camfill, Robert Emmet,	<i>Forest Hills.</i>
Capps, Joseph Almarin, A.B. (<i>Ill. Coll.</i>) 1891,	<i>Jacksonville, Ill.</i>
Chadwick, Henry Dexter,	<i>Boscowen, N. H.</i>
Chapin, Alva Le Roy,	<i>Oneida, N. Y.</i>
Chicoine, Isidore Hermanigilde,	<i>Lynn.</i>
Clute, Arthur Lambert,	<i>Minneapolis, Minn.</i>
Codman, Ernest Amory, A.B. 1891,	<i>Boston.</i>
Cowan, John Rice, A.B. (<i>Centre Coll.</i>) 1890,	<i>Danville, Ky.</i>
Cruikshank, Herbert Wyche,	<i>Talladega, Ala.</i>
Cunningham, Benjamin Frazier, PH.B. (<i>Tufts Coll.</i>) 1891,	<i>Gloucester.</i>
Cushing, Harvey Williams, A.B. (<i>Yale Univ.</i>) 1891,	<i>Cleveland, O.</i>
Daley, Robert Nicholas, Jr., A.B. (<i>Boston Coll.</i>) 1891,	<i>So. Boston.</i>
Darling, Charles Balfour, A.B. 1891,	<i>Woburn.</i>
Deans, Herbert Clair,	<i>Boston.</i>
Denny, Francis Parkman, A.B. 1891,	<i>Brookline.</i>
Dolliver, George Carroll, PH.B. (<i>Tufts Coll.</i>) 1891,	<i>Gloucester.</i>
Donoghue, Francis Dennis,	<i>Georgetown.</i>
Drew, Fred, A.B. (<i>Bowdoin Coll.</i>) 1891,	<i>Boston.</i>
Drohan, James Henry,	<i>Brockton.</i>
Dudley, Augustus William, A.B. 1891,	<i>Presque Isle, Me.</i>
Edes, Richard Edward, A.B. (<i>Johns Hopkins Univ.</i>) 1889,	<i>Jamaica Plain.</i>
Egan, John Joseph, A.B. (<i>Boston Coll.</i>) 1891,	<i>Peabody.</i>
Ela, Paul Francis, A.B. (<i>Wesleyan Univ.</i>) 1884, A.M. (<i>Ibid.</i>) 1888,	<i>Cambridge.</i>
Enebuske, Claës Julius, A.M., PH.D. (<i>Royal Univ., Lund, Sweden</i>) 1885,	<i>Boston.</i>
Fales, Alonzo Cartland,	<i>Middleton, N. S.</i>
Farnham, John Marshall Willoughby, A.B. (<i>Amerst Coll.</i>) 1891,	<i>Newton Centre.</i>
Fontaine, Henri Theophile,	<i>Suncook, N. H.</i>
French, Towneley Thorndike,	<i>West Roxbury.</i>
Frost, N. Alford,	<i>Windham Depot, N. H.</i>
Gilchrist, Charles Robert,	<i>Roxbury.</i>
Goodhue, Ralph Fessenden,	<i>Allston.</i>
Gross, Edward Blake,	<i>Provincetown.</i>
Gunckel, Joseph Sutphin,	<i>Dayton, O.</i>
Gunther, Elsner Christian, A.B. 1889,	<i>New York, N. Y.</i>

Harriman, Frank Whitman,	<i>Framingham.</i>
Hastings, John Mason, A.B. (<i>Bowdoin Coll.</i>)	
1891,	<i>Bangor, Me.</i>
Hewes, Henry Fox, A.B. 1890,	<i>Cambridge.</i>
Hibbard, Cleon Melville, A.B., S.B., L.B. (<i>Mo.</i>	
<i>State Univ.</i>) 1890,	<i>Canton, Mo.</i>
Holmes, Edgar Miller,	<i>Middletown, Conn.</i>
Hunt, Daniel Lawrence, A.B. 1891,	<i>Roxbury.</i>
Jewett, Walter Kendall, A.B. (<i>Brown Univ.</i>)	
1891,	<i>Fitchburg.</i>
Johnson, Grahame Dove,	<i>Andover.</i>
Joslin, Elliott Proctor, A.B. (<i>Yale Univ.</i>) 1890,	
PH.B. (<i>Yale S. S.</i>) 1891,	<i>Boston.</i>
Kennard, Harry Delano,	<i>East Somerville.</i>
Keown, James Archibald, PH.G. (<i>Mass. Coll.</i>	
<i>Pharm.</i>) 1891,	<i>Lynn.</i>
Lake, Charles Norton, PH.C. (<i>Univ. of Mich.</i>)	
1884,	<i>Boston.</i>
MacPherson, George Sturtevant, A.B. 1890,	<i>E. Boston.</i>
Madden, William Daniel, A.B. (<i>Mt. St. Mary's</i>	
<i>Coll.</i>) 1891,	<i>Boston.</i>
Magurn, Francis Thomas Louis,	<i>Charlestown.</i>
Marsh, Arthur White,	<i>Leicester.</i>
McAdams, James Philip, A.B. 1891,	<i>Somerville.</i>
McGrath, John Edward,	<i>Natick.</i>
McKoan, John William,	<i>Worcester.</i>
Mehegan, Daniel Joseph,	<i>Taunton.</i>
Meigs, Return Jonathan,	<i>Lowell.</i>
Mercer, William James, A.B. (<i>Holy Cross Coll.</i>)	
1891,	<i>Pittsfield.</i>
Metcalf, Ben Hicks, A.B. (<i>Alleghany Coll.</i>)	
1892,	<i>Meadville, Pa.</i>
Miller, Lester Colwell,	<i>W. Rockport, Me.</i>
Mix, Charles Louis, A.M. 1891,	<i>Chicago, Ill.</i>
Morse, Frank Leander,	<i>Marlboro'.</i>
Painter, Charles Fairbank, A.B. (<i>Johns Hopkins</i>	
<i>Univ.</i>) 1891,	<i>Great Barrington.</i>
Pierce, Appleton Howe,	<i>Boston.</i>
Plummer, Frank Wentworth, A.B. (<i>Dartmouth</i>	
<i>Coll.</i>) 1891,	<i>Somerville.</i>
Poore, John Robinson,	<i>Boston.</i>
Potter, Nathaniel Bowditch, A.B. 1890,	<i>Cambridge.</i>
Procter, Percy Clement,	<i>Boston.</i>

- Procter, Thomas Walter, PH.G. (*Mass. Coll. Pharmacy*) 1887, *Boston.*
- Putnam, Charles Russell Lowell, A.B. 1891, *Boston.*
- Putnam, Willard Abram, *New Salem.*
- Quinn, James Ambrose, *So. Boston.*
- Reddy, Joseph Warren, *So. Boston.*
- Roberts, Henry Ambrose, A.B. (*Dartmouth Coll.*) 1890, *Wakefield, N. H.*
- Robey, William Henry, Jr. *Dorchester.*
- Sargent, George Bancroft, *Lawrence.*
- Saville, Sumner Carruth, A.B. 1891, *Cambridge.*
- Shapleigh, Alfred Lindsay, A.B. 1892, *Allston.*
- Shores, Harvey Towle, S.B. (*Mass. Agricultural Coll.*) 1891, *W. Bridgewater.*
- Smith, Frank Simpson, *Boston.*
- Smith, Fred Stevens, *No. Andover.*
- Smith, Thomas Burke, A.B. (*Trinity Coll.*) 1891, *Hartford, Conn.*
- Smithwick, Marsena Parker, A.B. (*Bowdoin Coll.*) 1888, A.M. (*Ibid.*) 1891, *Boston.*
- Sosnowski, Philip, 2d, *Roxbury.*
- Spear, Walter May, *Rockland, Me.*
- Stanton, Thomas Leo, *Boston.*
- Stevens, Henry Burt, *Norwich, Conn.*
- Stiles, Herbert Kendall, A.B. (*Amherst Coll.*) 1891, *Newtonville.*
- Swan, Charles Louis, A.B. 1891, *Stoughton.*
- Tenney, William Northend, *Georgetown.*
- Thomas, George Henry, A.B. 1892, *E. Boston.*
- Tukey, Frank Martin, A.B. (*Bowdoin Coll.*) 1891, *New Castle, Me.*
- Underwood, Francis Andrew, A.B. (*Holy Cross Coll.*) 1891, *Worcester.*
- Webber, Stephen Elvaro, A.B. (*Colby Univ.*) 1886, A.M. (*Ibid.*) 1889, *Chesterville, Me.*
- Weller, Francis Joseph, A.B. (*Boston Coll.*) 1888, *So. Boston.*
- Wheaton, James Lucas, Jr., PH.B. (*Brown Univ.*) 1891, *Pawtucket, R. I.*
- White, Franklin Warren, S.B. (*Mass. Inst. of Tech.*) 1890, *Framingham.*
- Williams, David Gardner, Jr. *Boston.*
- Williams, Edward Denison, PH.B. (*Univ. of Vt.*) 1890, *Peacham, Vt.*

Williams, Edward Russell,	<i>Boston.</i>
Williams, Frank Percival,	<i>Boston.</i>
Wilson, Fred Newhall,	<i>Boston.</i>
Wright, Charles Sias, A.B. (<i>Bowdoin Coll.</i>) 1891,	<i>Portland, Me.</i>
Wylie, Eugene Cushman,	<i>Chelsea.</i>

SECOND CLASS.

Anderson, Hyrum Andrew,	<i>Provo, Utah.</i>
Andrews, Edward Austin,	<i>Malden.</i>
Andrews, Harold Virgil,	<i>Lawrence.</i>
Bamji, Manakshah Cowasji, C.E., B.SC. (<i>Bombay Univ.</i>) 1889,	<i>Bombay, India.</i>
Barnes, Harry Aldrich,	<i>Somerville.</i>
Barrell, Charles Sewall,	<i>York Corner, Me.</i>
Burke, Michael Francis, A.B. (<i>Boston Coll.</i>) 1892,	<i>Natick.</i>
Byrnes, Thomas James,	<i>Rockville, Conn.</i>
Cahill, John Thomas, A.B. (<i>Holy Cross Coll.</i>) 1890,	<i>Lawrence.</i>
Calder, Augustus Woodbury A.B. (<i>Brown Univ.</i>) 1891,	<i>Providence, R. I.</i>
Carden, Charles James,	<i>Lawrence.</i>
Carpenter, Dudley Newcomb,	<i>Portsmouth, N. H.</i>
Chapman, Edwin Morton,	<i>Needham.</i>
Clap, Edmund Wright, A.B. 1892,	<i>Attleboro Falls.</i>
Cleborne, Ronayne Kirkbride,	<i>Chelsea.</i>
Cooke, Henry Arnold, A.B. (<i>Amherst Coll.</i>) 1889,	<i>No. Brookfield.</i>
Crandell, Arthur Richmond, A.B. 1892	<i>Taunton.</i>
Cross, William Patrick,	<i>So. Boston.</i>
Cummin, John White, A.B.	<i>Williamsport, Pa.</i>
Curry, Edmund Farnham,	<i>Winchester.</i>
Curry, Joseph James,	<i>Charlestown.</i>
Cusick, Thomas Francis	<i>Taunton.</i>
Daniel, Vivian,	<i>E. Boston.</i>
Daniels, Roy Adelbert,	<i>Malden.</i>
Davis, Arthur Fletcher,	<i>North East, Pa.</i>
Davis, Ralph Gordon,	<i>New Bedford.</i>
Dean, Ralph Deniston,	<i>Taunton.</i>
Desmond, Clarence Francis,	<i>Worcester.</i>
Donnelly, Harry Albert,	<i>Boston.</i>
Dow, George Farwell, A.B. 1892,	<i>Reading.</i>

Dowling, John Joseph,	<i>Boston.</i>
Downey, William Henry, A.B. (<i>Amherst Coll.</i>) 1892,	<i>No. Brookfield.</i>
Eaton, Richard Gardner, A.B. (<i>Yale Univ.</i>) 1892,	<i>Wakefield.</i>
Ellsworth, Samuel Walker, A.B. 1893,	<i>Braintree.</i>
Emery, Ernest Washburn, A.B. (<i>Bates Coll.</i>) 1892,	<i>Melrose.</i>
Flint, Carleton Phillips,	<i>Boston.</i>
Freeman, George Franklin, A.B. (<i>Bowdoin Coll.</i>) 1890,	<i>Everett.</i>
Frost, Horace Bird, A.B. 1892,	<i>Belmont.</i>
Gallagher, William Howard,	<i>E. Boston.</i>
Goulding, Timothy Francis,	<i>Somerville.</i>
Grant, William Herbert,	<i>Boston.</i>
Greenough, Robert Battey, A.B. 1892	<i>Cambridge.</i>
Haines, Ignatius,	<i>Cambridge.</i>
Harkins, Cornelius Patrick, Jr.	<i>Boston.</i>
Hart, Michael Joseph,	<i>W. Fitchburg.</i>
Hawkins, Joseph Francis,	<i>Providence, R. I.</i>
Hickey, John Aloysius, A.B. (<i>Boston Coll.</i>) 1887,	<i>E. Boston.</i>
Hilton, Weston Morton, A.B. (<i>Bowdoin Coll.</i>) 1891,	<i>Damariscotta, Me.</i>
Hinckley, Donald Rose, A.B. (<i>Yale Univ.</i>) 1892,	<i>Northampton.</i>
Hitchcock, William Alvan, Jr	<i>Asylum Station.</i>
Hixon, Edwin Colfax,	<i>Denver, Col.</i>
Holland, Hubert Thomas,	<i>Jamaica Plain.</i>
Horgan, Daniel Matthew,	<i>Boston.</i>
Howland, Joseph Briggs,	<i>Brockton.</i>
Hubbard, Joshua Clapp, A.B. 1892,	<i>Boston.</i>
Hudson, Arthur Stanton,	<i>Newton.</i>
Hyde, George Edward, Jr.	<i>Dorchester.</i>
Jones, Daniel Fiske, A.B. 1892,	<i>Minneapolis, Minn.</i>
Kernan, William Everett,	<i>Wakefield.</i>
Kilroy, Francis Henry, A.B. (<i>Holy Cross Coll.</i>) 1891,	<i>Fall River.</i>
Knight, Charles Storer,	<i>Deering, Me.</i>
Landers, Maurice Joseph,	<i>Lowell.</i>
Langdon, Francis Eustis,	<i>Portsmouth, N. H.</i>
Lavallee, George Omer,	<i>Lowell.</i>
Leonard, Edwin, Jr.	<i>Dover.</i>
Leslie, Herbert Granville,	<i>Amesbury.</i>
Loring, Robert Gardner, A.B. 1892,	<i>Boston.</i>
Loughran, James Francis,	<i>Lowell.</i>
Lyon, Frederick Dow, A.B. (<i>Tufts Coll.</i>) 1892,	<i>Poland, Me.</i>

Mahon, James Arthur,	<i>Roxbury.</i>
Mains, Charles Frederick,	<i>Framingham.</i>
Mann, Arthur Teall, S.B. (<i>Univ. of Minn.</i>) 1888,	<i>Minneapolis, Minn.</i>
Maskell, Leonard Joseph, A.B. (<i>Holy Cross Coll.</i>) 1891,	<i>Newton.</i>
McCarthy, Timothy Francis, A.B. (<i>Holy Cross Coll.</i>) 1892,	<i>E. Boston.</i>
McCauley, Albert Anthony, A.B. (<i>Holy Cross Coll.</i>), 1892,	<i>Springfield.</i>
McDermott, William Vincent,	<i>Salem.</i>
McGillicuddy, Cornelius Joseph, A.B. (<i>Boston Coll.</i>) 1892,	<i>Boston.</i>
McGourty, James Eugene,	<i>Worcester.</i>
McIntyre, George Francis,	<i>Worcester.</i>
McKeen, George Wilbert, S.B. (<i>Dalhousie Coll.</i>) 1892,	<i>Baddeck, N. S.</i>
McKeen, Sylvester Forshay,	<i>Cambridge.</i>
Mosher, Harris Peyton, A.B. 1892,	<i>Brookline.</i>
Newell, Franklin Spilman, A.B. 1892,	<i>Roxbury.</i>
Norton, Harry Lovett, A.B. 1891,	<i>Boston.</i>
O'Connor, John Henry, A.B. (<i>Holy Cross Coll.</i>) 1892,	<i>No. Chelmsford.</i>
O'Donnell, George Thomas,	<i>Marlborough.</i>
O'Neil, Richard Frothingham,	<i>Boston,</i>
O'Sullivan, John Joseph,	<i>Lawrence,</i>
Oakes, Fitz Albert,	<i>Gloucester.</i>
Page, George Thornton, A.B. 1892,	<i>Cambridge.</i>
Parker, Arthur Holmes,	<i>Waltham.</i>
Pegram, John Combe, Jr., A.B. (<i>Brown Univ.</i>) 1892,	<i>Providence, R. I.</i>
Peirce, Frederick Joseph,	<i>Atlantic.</i>
Perley, Roscoe Damon,	<i>Ipswich.</i>
Perry, Arthur Reed, A.B. 1892,	<i>Attleboro.</i>
Perry, Henry Joseph, A.B. (<i>Tufts Coll.</i>) 1892,	<i>Fort Plain, N. Y.</i>
Pettee, John Harris,	<i>Roxbury.</i>
Pickard, Isaiah Lovell, A.B. (<i>Amherst Coll.</i>) 1891,	<i>Littleton Common.</i>
Pillsbury, Frederick Ainsworth,	<i>Boston.</i>
Pinkham, Edward Warwick, A.B. 1892,	<i>Lynn.</i>
Pleadwell, Frank Lester,	<i>Taunton.</i>
Proctor, Joseph Whipple,	<i>Malden.</i>
Rothfuchs, Charles Christian,	<i>Boston.</i>

Sanborn, John Wesley,	<i>Boston.</i>
Savage, John Joseph,	<i>Lowell.</i>
Schwab, Sidney Isaac,	<i>St. Louis, Mo.</i>
Scudder, Gardiner Hubbard, A.B. 1892,	<i>Cambridge.</i>
Sears, Harry Edward, A.B. 1893,	<i>Boston.</i>
Shanahan, Thomas Joseph,	<i>Lawrence.</i>
Sheehan, Martin David,	<i>Brookline.</i>
Sherwood, Walter,	<i>Boston.</i>
Smith, William Henry, A.B. (<i>Brown Univ.</i>) 1892,	<i>Fall River.</i>
Spencer, Charles Shackford,	<i>Chelsea.</i>
Stepp, Jacob, Jr.	<i>Boston.</i>
Strong, Lawrence Watson, A.B. 1892,	<i>Waban.</i>
Sullivan, David Augustine,	<i>So. Boston.</i>
Sullivan, Walter Greene,	<i>Providence, R. I.</i>
Talbott, Bertell Laroy,	<i>Milford, N. H.</i>
Thorndike, William, A.B. 1892,	<i>Boston.</i>
Torrey, John Paine,	<i>Harvard.</i>
Vose, Robert Henry, A.B. (<i>Amherst Coll.</i>) 1892,	<i>Providence, R. I.</i>
Washburn, Frederick Augustus, Jr., A.B. (<i>Amherst Coll.</i>) 1892,	<i>New Bedford.</i>
Washburn, Mortimer Cummings,	<i>Tyngsboro.</i>
Watkeys, Frederick William,	<i>E. Somerville.</i>
Webber, Harry Allen,	<i>Lynn.</i>
Willard, Henry Francis, A.B. 1892,	<i>Dorchester.</i>
Williams, Allen Hamilton, A.B. 1891,	<i>Fort Wayne, Ind.</i>
Willis, Charles Austin, PH.B. (<i>Tufts Coll.</i>) 1892,	<i>Waltham.</i>
Willis, Dwight Fletcher, PH.B. (<i>Tufts Coll.</i>) 1892,	<i>Waltham.</i>
Woodbury, Frank Taylor,	<i>No. Weare, N. H.</i>
Worthington, Arthur Morton, S.B. (<i>Mass. Inst. of Tech.</i>) 1892,	<i>Dedham.</i>
Young, Ernest Boyen, A.B. (<i>Bowdoin Coll.</i>) 1892,	<i>Brunswick, Me.</i>
Young, Jonathan Frank, Jr.	<i>Boston.</i>

FIRST CLASS.

Adams, John,	<i>Dingle, Ireland.</i>
Adams, William Gray,	<i>Hyde Park.</i>
Allen, Seabury Wells, A.B. 1891,	<i>Boston.</i>
Amerman, George L., A.B. (<i>Yale Univ.</i>) 1890,	<i>Chicago, Ill.</i>
Badger, George Sherwin Clark, A.B. (<i>Yale Univ.</i>) 1892,	<i>Boston.</i>
Barrett, Joel Lewis,	<i>Woburn.</i>
Barton, John Alfred,	<i>Waltham.</i>

Barton, William Henry,	<i>Waltham.</i>
Beal, Howard Walter,	<i>Lewiston, Me.</i>
Blodgett, John Hammond,	<i>Boston.</i>
Bradley, James Joseph,	<i>Nashua, N. H.</i>
Breneman, Henry Kendig,	<i>San Antonio, Texas.</i>
Briggs, Charles Edwin, A.B. (<i>Oberlin Coll.</i>) 1893,	<i>Calumet, Mich.</i>
Broughton, Arthur Nicholson, A.B. 1893,	<i>Jamaica Plain.</i>
Brousseau, William Gilbert,	<i>Boston.</i>
Buffum, Herbert Edwin,	<i>Somerville.</i>
Burden, Ernest Drucella,	<i>Malden.</i>
Burke, Ernest Gisborne, A.B. 1893,	<i>Quincy.</i>
Burns, Frederick Stanford,	<i>Boston.</i>
Burrows, Fred Grant, A.B. (<i>Leland Stanford Jr.</i> <i>Univ.</i>) 1892, A.M. (<i>Ibid.</i>) 1893,	<i>Chualar, Cal.</i>
Butler, Charles Shorey, A.B. 1893,	<i>Boston.</i>
Carter, Curtis Sumner,	<i>Lynn.</i>
Carvill, Sewell Albert,	<i>Somerville.</i>
Catlin, Sanford Robinson, PH.B. (<i>Beloit Coll.</i>) 1893,	<i>Rockford, Ill.</i>
Chamberlain, Weston Percival, A.B. (<i>Bowdoin</i> <i>Coll.</i>) 1893,	<i>Bristol, Me.</i>
Clough, Frank Herbert,	<i>Allston.</i>
Cobe, Joseph Myer, PH.G. (<i>Coll. of Pharm.</i>) 1892,	<i>Boston.</i>
Collin, Carl Oscar Louis,	<i>Boston.</i>
Conlan, Patrick Henry, A.B. 1892,	<i>Cambridge.</i>
Coon, William Hall,	<i>Wakefield.</i>
Corcoran, George Bernard,	<i>Charlestown.</i>
Costello, John Henry, Jr.	<i>Boston.</i>
Cronin, Jeremiah Augustine, A.B. (<i>Boston Coll.</i>) 1893,	<i>So. Boston.</i>
Cushing, Charles Baldwin,	<i>Cohasset.</i>
Cutler, Charles Newton,	<i>Chelsea.</i>
Daly, Timothy Joseph,	<i>Lawrence.</i>
Davis, William Horace, A.B. 1893,	<i>Holyoke.</i>
Davy, Joseph Winsor,	<i>Weymouth.</i>
Decker, William Nelson,	<i>Concord.</i>
Dennis, James Henry,	<i>Worcester.</i>
Dewing, Louis Alexander,	<i>Somerville.</i>
Donlan, John Malachi,	<i>Fitchburg.</i>
Donohoe, George,	<i>Dorchester.</i>
Dudley, Charles,	<i>Abington.</i>
Elliott, James William,	<i>Boston.</i>
Emery, George Edwin,	<i>Leominster.</i>

Fitzgerald, Thomas Patrick, A.B. (<i>Boston Coll.</i>) 1893,	<i>Cambridge.</i>
Forbes, Edwin Bannister,	<i>Lawrence.</i>
Galloupe, Joseph Abbott,	<i>Beverly.</i>
Gamble, William Burt, S.B. (<i>Mass. Inst. of Tech.</i>) 1893,	<i>Detroit, Mich.</i>
Gilbert, Louis Whitmore, A.B. 1893,	<i>Cambridge.</i>
Gilchrist, Robert Watson,	<i>Boston.</i>
Guiler, Robert Workman,	<i>Boston.</i>
Handy, Harry Tucker,	<i>Marion.</i>
Harris, Samuel Jacob, Jr.	<i>Williamsburg, Va.</i>
Hayes, Daniel John,	<i>Springfield.</i>
Hill, Clarence Harvey,	<i>Brookline.</i>
Hogan, Joseph Ambrose,	<i>Lawrence,</i>
Homan, John Milton,	<i>Roslindale.</i>
Horner, Thompson Mitchell,	<i>Baltimore, Md.</i>
Hurd, Randolph Campbell,	<i>Newburyport.</i>
Hyder, William Bowdoin,	<i>Thomaston, Me.</i>
Johnson, David Joseph,	<i>Boston.</i>
Jones, Frederick Ellis,	<i>Quincy.</i>
Kendall, Watson Hatch,	<i>Providence, R. I.</i>
Larrabee, Ralph Clinton, A.B. 1893,	<i>Boston.</i>
Lecompte, Walter Augustus, A.B. 1893,	<i>Newton Centre.</i>
Lees, Rush Oliver,	<i>Plymouth, Pa.</i>
Lennon, Joseph Malachi, A.B. (<i>Boston Coll.</i>) 1893,	<i>Dorchester.</i>
Lindström, Carl Gustav,	<i>Boston.</i>
Logan, Francis Parker Tays,	<i>Boston,</i>
Low, Harry Chamberlain, A.B. 1893,	<i>Salem.</i>
Luppold, William,	<i>E. Boston.</i>
Macdonald, Harry Mortimer,	<i>Boston.</i>
Madden, John Joseph, A.B. (<i>Mt. St. Mary's Coll.</i>) 1892,	<i>Boston.</i>
Maguire, Charles Francis, A.B. (<i>Boston Coll.</i>) 1893.	<i>Somerville.</i>
Mansur, Leon Wallace,	<i>Boston.</i>
Marcy, Henry Orlando, Jr., A.B. 1893,	<i>Boston.</i>
Maulhardt, Adolph Antone,	<i>Ventura, Cal.</i>
McGann, John Henry,	<i>Natick.</i>
McIsaac, John Alexander, A.B. (<i>St. Francis Xavier</i>) 1892,	<i>Boston.</i>
McKenna, James Charles,	<i>Charlestown.</i>
McManus, John Joseph,	<i>Rutland, Vt.</i>
McMurtry, Charles Wood,	<i>Pittsburgh, Pa.</i>

Means, Philip Corydon,	<i>Merrimac.</i>
Medina, Fred Emanuel,	<i>Lowell.</i>
Metzger, Butler,	<i>Lynn,</i>
Miller, James,	<i>Boston.</i>
Montoya, José Maria.	<i>Bogota, Columbia, S. A.</i>
Moore, Francis, Jr.	<i>Charlestown.</i>
Moore, John Henry,	<i>Pittsfield, Ill.</i>
Moorehouse, George Wilton, L.B. (<i>Univ. of Wis.</i>)	
1891, L.M. (<i>Ibid.</i>) 1893,	<i>Wauwatosa, Wis.</i>
Moriarty, James Liguori,	<i>Norwich, Conn.</i>
Morrill, Sibley Gage,	<i>Concord, N. H.</i>
Mullins, Edwin Stanton, A.B. 1893,	<i>Pittsburgh, Pa.</i>
Newsome, Edgar Thomas,	<i>Roslindale.</i>
Newton, Frank Brownlie,	<i>Stafford Springs, Conn.</i>
O'Keefe, John Aloysius,	<i>New Bedford.</i>
Oliver, Thomas Edward, A.B. 1893,	<i>Salem.</i>
Paine, Sumner,	<i>Weston.</i>
Patten, Stephen Kerr,	<i>Boston.</i>
Peavey, Ralph Albert,	<i>Bangor, Me.</i>
Phillips, Walter Lewis,	<i>Olneyville, R. I.</i>
Reed, Victor Augustus,	<i>Middleton.</i>
Reid, Harold Newton, S.B. (<i>Cornell Univ.</i>) 1890,	<i>Boston.</i>
Richmond, Simon,	<i>Chelsea.</i>
Ryder, Charles Edward,	<i>So. Boston.</i>
Ryerson, Edwin Warner.	<i>Chicago, Ill.</i>
Sands, Edward Parker,	<i>Boston.</i>
Shea, John Joseph,	<i>Salem.</i>
Smart, Frank Everard,	<i>Lawrence.</i>
Smyser, Charles James,	<i>Brookline.</i>
Spalding, Fred Maurice, A.B. 1893,	<i>Cambridge.</i>
Spooner, Henry Garrettson,	<i>Boston.</i>
Stack, Charles Francis, A.B. (<i>Boston Coll.</i>) 1893,	<i>Hyde Park.</i>
Stetson, Frank Eliot, A.B. 1893,	<i>Boston.</i>
Stetson, Frederick Winslow,	<i>Duxbury.</i>
Stevens, Ralph Emerson,	<i>Marlboro'.</i>
Strachan, William Mortimer, Jr.	<i>Boston.</i>
Stubbs, Frank Raymond, A.B. 1893,	<i>Cambridge.</i>
Sturdivant, Guy Waldron,	<i>Roxbury.</i>
Sullivan, George Henry,	<i>E. Boston.</i>
Sullivan, John Thomas, Jr.	<i>Boston.</i>
Swain, Howard Townsend,	<i>Copake, N. Y.</i>
Sweet, John Henry, Jr.	<i>Newport, R. I.</i>
Van Magness, Benjamin, Jr.	<i>Chelsea.</i>

Vinal, Harry Gardner,	<i>Wellesley.</i>
Vogel, James Oswald,	<i>W. Quincy.</i>
Weeks, William Joshua,	<i>New Bedford.</i>
Wentworth, Harry Wilder,	<i>Chelsea.</i>
White, William Horace,	<i>Somerville.</i>
Whitehead, George Daniel,	<i>Roxbury.</i>
Whiteside, George Shattuck,	<i>So. Hero, Vt.</i>
Williams, Harry Edwin,	<i>Newtonville.</i>
Yost, John Dickson,	<i>San Francisco, Cal.</i>

SUMMARY.

IN COURSES FOR GRADUATES, 1893-94 (to Dec. 1) . .	26
FOURTH CLASS	38
THIRD CLASS	114
SECOND CLASS	133
FIRST CLASS	135
TOTAL	<hr/> 446

THE MEDICAL SCHOOL.

REQUIREMENTS FOR ADMISSION.

All candidates for admission must (with the exceptions hereinafter stated) pass an examination in the following subjects:—

1. **ENGLISH.** Every candidate will be required to write, legibly and correctly, an original English composition of not less than two hundred words, and also to write English prose from dictation.

2. **LATIN.** The translation at sight of simple Latin prose.

3. **PHYSICS.** A competent knowledge of Physics (such as may be obtained from Gage's Elements of Physics).

4. **CHEMISTRY.** Theoretical and descriptive (inorganic) Chemistry (a course based on Remsen's Introduction to the Study of Chemistry, or any similar manual), and qualitative analysis..

5. **ELECTIVE SUBJECT.** Each candidate must pass an examination in any *one* of the following subjects: French, German, Algebra (through quadratic equations), Plane Geometry, Botany.

Each candidate will be required to hand in, at the hour of the written examination in Chemistry, the original note-book in which he recorded the work performed by him at school in qualitative analysis. This note-book must bear the endorsement of his teacher, certifying that the notes are a true record of the pupil's laboratory work.

When a candidate shall give evidence of having passed a satisfactory examination in any of the above requirements either at Harvard College or at the Lawrence Scientific School, a subsequent examination in such subject or subjects will not be demanded for his admission to the Medical School.

Candidates who present a degree in Letters, Science, or Medicine, from a recognized college or scientific school are exempt from all the above examinations, with the exception of Chemistry.*

Candidates, may be admitted conditionally in spite of deficiencies in some of these studies; but, until these conditions are made up, no student

* The Summer Courses of Instruction in the fundamental principles of Chemistry and in qualitative analysis, given at Harvard College, and the Summer Courses given at the Medical School are adapted to students about to enter the Medical School.

will be permitted to take part in any exercises of the third class, or present himself for examination in the subjects of that class.

Students conditioned in Chemistry at the examination for admission will be furnished in the School, during the first year, with opportunities for making up this condition.

The examinations will be held at the Medical School (688 Boylston St., Boston), and will be conducted in writing; specimens of the papers used will be found in the Catalogue to be obtained of the Dean. In judging the work of the candidate, the spelling, grammar, and construction will be considered.

The examinations for admission are held on the Thursday following the last Wednesday in June, and on the Monday preceding the last Wednesday in September, beginning at 10 A.M.

In 1894 the *examinations for admission* will ALSO be held at the following places, beginning at 8 A.M. on Thursday, June 28:—

In *Quincy*, in the rooms of the Adams Academy; in *Andover*, in the rooms of the Phillips Academy; in *Groton*, in the rooms of the Groton School; in *Southborough*, in the rooms of St. Mark's School; in *Worcester*, in Curtis Hall, the Young Men's Christian Association building, Elm Street; in *Exeter, N. H.*, in the rooms of Phillips Exeter Academy; in *Concord, N. H.*, in the rooms of St. Paul's School; in *New York, N. Y.*, in the lecture-room of the Young Men's Christian Association, Twenty-third Street, corner of Fourth Avenue; in *Albany, N. Y.*, in the rooms of the Young Men's Christian Association; in *Buffalo, N. Y.*, in the High School building, corner of Court and Franklin Streets; in *Rochester, N. Y.*; in *Philadelphia, Pa.*, in the rooms of the Young Men's Christian Association building, corner of 15th and Chestnut Streets; in *Washington, D. C.*, in the rooms of the Young Men's Christian Association; in *Cleveland, O.*, in the Central High School building; in *Cincinnati, O.*, in the rooms of the Law School, College Building, Walnut Street; in *Chicago, Ill.*, in the rooms of the Chicago Athenaeum, VanBuren Street; in *St. Louis, Mo.*, in the Board of Education building, corner of Ninth and Locust Streets; in *Minneapolis, Minn.*, in the lecture-room of the Public Library building; in *Denver, Col.*, in the rooms of the Denver High School (District No. 1), corner of Nineteenth and Stout Streets; in *San Francisco, Cal.*, in the rooms of the Mechanics' Institute, 31 Post Street; in *Belmont, Cal.*, in the rooms of the Belmont School; in *Portland, Oregon*; in *Bonn, Germany*, at the Hotel Kley.

DIVISION OF STUDIES.

FOUR YEARS' COURSE.

For the First Year.—Anatomy, Physiology, Histology and Embryology, Hygiene, Bacteriology, and Medical Chemistry.

For the Second Year. — Practical and Topographical Anatomy, Clinical Chemistry, Pathology and Pathological Anatomy, Clinical Medicine, Theory and Practice, Surgery, Clinical Surgery, Materia Medica, and Therapeutics.

For the Third Year. — Obstetrics and Clinical Obstetrics, Theory and Practice of Medicine, Clinical Medicine, Surgery, and Clinical Surgery, Dermatology, Diseases of the Nervous System, Diseases of Children, Mental Diseases, and Gynæcology.

For the Fourth Year. — Clinical Medicine, Clinical Surgery, Clinical Microscopy, Genito-urinary Surgery, Ovarian Tumors, Mental Diseases, Municipal Sanitation, Cookery, Ophthalmology, Otology, Laryngology, Orthopedics, Legal Medicine, and Syphilis; and, as elective studies, Ophthalmology, Otology, Orthopedics, Gynaecology, Dermatology, Neurology, Bacteriology, Physiology, Chemistry, Hygiene, Operative Surgery, and Operative Obstetrics.

METHODS OF INSTRUCTION.

The following methods of instruction are adopted in the several departments : —

Anatomy. — Lectures ; various practical exercises, including abundant dissection, under the direction of the Demonstrator ; recitations and demonstrations. In the first year there is a recitation at the end of the week on the subject-matter of the lectures of the week. The means and methods of illustrating the anatomical lectures are probably unrivalled in this country. In the second year much use is made of frozen sections and of the living model.

Histology and Embryology. — Lectures and laboratory work. Every student is recommended to purchase a microscope, but microscopes are provided for those whose means do not enable them to buy one, for the sum of \$3 for each term. Accommodations are furnished for those students who wish to pursue special or advanced courses. Special facilities are offered for original investigators. A special course in vertebrate embryology is given. This course has been accepted by the Faculty of Arts and Sciences, and is open to students of the academic departments.

Physiology. — Lectures, recitations, conferences, and demonstrations and practical work in the Laboratory. To students of the second, third, and fourth classes, opportunities are given for original investigations in the Laboratory.

Chemistry is taught mainly by practical work in the Laboratory, the student having his own desk and apparatus. In the second half of the first year Medical Chemistry is taught by lectures, recitations, and exercises in the Laboratory, where each student will be taught the chemistry and microscopy of the urine and the tests for the important poisons.

During the second year the instruction will be chiefly clinical in character, the student being taught the diagnosis of kidney and other diseases by examination of the urine, and clinical toxicology. Instruction will also be given in the examination of blood and other stains, and of pathological concretions and fluids.

Pathology and Pathological Anatomy are taught by lectures, recitations, and practical instruction in pathological histology. Recently the Sears' Building, the gift of Dr. Henry F. Sears, having been finished, has been used for the instruction in this department. The basement is fitted up for the care of animals and for the storage of material. The first story contains the bacteriological laboratories. On the second floor are the rooms for the officers of instruction and for special students in pathological anatomy and histology. In the third story is the class-room for recitations and demonstrations, and for instruction in pathological histology. An adjoining room is especially constructed for photography. These laboratories open directly into the physiological laboratory which, in turn, is immediately connected with that for chemistry; all the appliances of each laboratory are thus available to the students in any one of them with the least possible loss of time. The collection of the Warren Anatomical Museum is used to illustrate the lectures, and morbid specimens in a fresh state are shown at the demonstrations. The lectures on pathology are mainly given on general pathology including the various processes of disease, the condition and laws under which they are produced, and the effects which they exert on the functions of the body. In the demonstrations the appearances of diseased organs are studied, and the various changes which have taken place in them are described. The instruction in pathological histology is continued throughout the year. In this course the finer changes in the tissues are studied and the manner in which they are produced is explained. Both in this course and in the demonstrations particular attention is paid to the diagnosis of tumors. Each student, provided with a microscope, the necessary instruments and reagents, prepares the various objects and submits them for examination and criticism. The students are invited to be present at post mortem examinations, the method of conducting them is explained, and the students themselves are allowed to perform them. Every encouragement is given to the students to carry on individual work in the pathological laboratory. All the facilities for work are provided and subjects for original investigation will be assigned to those who have shown themselves capable. Only those students will be allowed to work individually in the laboratory who have shown by their work in the first two years of their study, that they are both diligent and capable. Microscopes will be provided those students whose means will not permit the purchase of an instrument.

Therapeutics and Materia Medica.—Therapeutics and Materia Medica are taught by lectures and recitations with exhibition of medicines and pharmaceutical processes. Besides the large and complete cabinet of materia medica in the Museum, a collection of officinal drugs and chemicals, and of all the important preparations is placed where it can be seen by the students at any time.

Experimental Pharmacology and Therapeutics.—A special laboratory has been equipped for original research in these subjects. Here an opportunity is offered for practical training and instruction in the methods and use of the special apparatus employed in determining the toxic and physiological action of drugs and their practical value as remedies. This is open to a limited number of duly qualified undergraduates.

The Theory and Practice of Medicine.—At the Medical School lectures on selected subjects are given to the third class, and systematic recitations on the general subject are held for the second class. Clinical lectures on the practice of medicine are given to the third class at the Hospital.

Clinical Medicine.—Daily instruction is given in this department by clinical lectures, hospital visits, and other exercises. Students are furnished with cases for personal examination, and are called upon to report them before the class, where they are criticised. These examinations are held both in the wards and in the amphitheatre. Another exercise, known as the clinical conference, affords an opportunity for more thorough preparation of cases, more time being allowed for their study. The full written report of a case is read by the student who has examined it. It is afterwards criticised by the class, by the Professor of Clinical Medicine, and other teachers in the School. In addition to this, a regular course of supplementary instruction is given in Auscultation and Percussion, and in Laryngoscopy, which affords students an abundant opportunity for acquiring a thoroughly practical knowledge of these methods of exploration.

Surgery.—Lectures and recitations. There are also courses on Surgical Anatomy, Minor Surgery, Orthopedic Surgery, and Laboratory Bandaging.

Clinical Surgery.—Instruction in Clinical Surgery is given at the Massachusetts General Hospital, City Hospital, and Carney Hospital, each week throughout the year, as follows:—

One clinical conference, one clinical lecture, eight visits in the hospital wards, and two public operating days.

The surgical clinical conference is an exercise at which a student of the third class presents an elaborate and carefully prepared paper on a surgical case in the hospital wards, which has been assigned him. This paper he is obliged to read in the amphitheatre of the Hospital before the whole class, and defend it from their criticism. At the close of the exercise the Professor of Clinical Surgery gives a résumé of the case and his opinions upon

it. The students of the second class attend these exercises preparatory to their active participation in them in their third year.

The second class is divided into small sections, and daily clinics are given to them in the out-patient department of the Massachusetts General Hospital and the City Hospital, in which the students are brought into personal contact with the patients, have practical exercises in the application of bandages and apparatus, and see a large number of cases of minor surgery.

The clinical lecture is given either over surgical cases brought into the amphitheatre and illustrated by explorations or operations, or at the bedside in the wards illustrating the dressing of wounds, the treatment of fractures, and the progress of cases from entrance to discharge from the Hospital. Every candidate for a degree is required to report a case in clinical surgery.

Operative Surgery. — A course illustrating all the classic and many of the modern operations in surgery is given by the Professor of Clinical Surgery to the third and fourth classes. These operations are repeated on the cadaver by the students under the direct supervision of the Professor and a corps of assistants.

Obstetrics. — Instruction in this department is given by lectures, recitations conferences and clinical teaching. Students are required to take charge of at least six cases of labor, caring for the patients during the convalescence, and making full written reports of the cases; many of these reports are read at the conferences and discussed by the class and the instructors. A course on operative obstetrics, with practical illustrations on the cadaver and manikin, is given during the second half-year.

Diseases of Women. — Lectures and practical instruction at the different dispensaries in the education of the touch. In these institutions every facility is given the student to become familiar with the different forms of uterine disease. A course in operative gynaecology extending throughout the year at the Free Hospital for Women is open to students of the third and fourth classes. To students of the fourth class cases are assigned for personal examination; these cases are reported in full at the clinical conference, and are made the subject of discussion by members of the class and the instructor. These students are also called upon to assist at the operations in the operative course. There is also a course in operative gynaecology upon the cadaver, at which each student of the fourth class is expected to perform the ordinary gynaecological operations with his own hands.

Diseases of Children. — The instruction in this subject consists of a systematic course of lectures beginning in the latter half of the second year and extending through the entire third year.

The second-year lectures comprise a careful study of infant-feeding and the development of the normal infant and child, and are intended to be

preparatory to the study of the diseased conditions, which are taught in the third year.

The teaching in the third year consists of lectures and the direct examination of cases. The amount of material at the disposal of the students in this department is very large, as it comprises the cases which are treated at the Boston Dispensary, Children's Hospital, and City Hospital. The special wards for Diphtheria and Scarlet Fever lately opened at the City Hospital offer unusual advantages for the study of these diseases, and are always at the disposal of the Professor for the benefit of the students. The instruction in the third year also includes eight clinical conferences and the visiting in their homes, in the Dispensary Districts, of such rare and interesting cases as are not usually seen in the hospitals.

The intention of the teaching in the fourth year is to have the student see a large number of cases, and to follow them carefully in their treatment from the beginning to the end of the disease.

Ophthalmology. — Lectures and clinical instruction at the Massachusetts Charitable Eye and Ear Infirmary, Boston City Hospital, and Massachusetts General Hospital.

Dermatology is taught by lectures and clinical illustrations. The special out-patient department at the Massachusetts General Hospital furnishes ample opportunities for illustration.

Syphilis. — Lectures and clinical instruction.

Otology. — Lectures and clinical instruction at the Massachusetts Charitable Eye and Ear Infirmary, and at the Boston City Hospital.

Laryngology. — Lectures and demonstrations.

Diseases of the Nervous System. — Lectures and demonstrations.

Legal Medicine. — Lectures and demonstrations.

Embryology and Histology. — Lectures.

Hygiene. — Lectures and demonstrations.

Bacteriology. — Lectures and practical work in the laboratory.

TEXT-BOOKS.

The following works are recommended as text-books, and for collateral reading and consultation : —

ANATOMY.

Text-Books. — Gray (11th edition). Morris. Quain (10th edition). Wilson. Holden's Landmarks. Dwight's Frozen sections of a Child. Treves' Applied Anatomy.

Collateral Reading. — Harrison Allen's Anatomy. Tillaux, Anatomie topographique. Holden's Osteology. Humphry's Human Skeleton. Morris, on the Joints. Weisse's Practical Human Anatomy. McClellan's Regional Anatomy.

HISTOLOGY AND EMBRYOLOGY.

Text-Books. — Stöhr's Lehrbuch der Histologie, or Schaefer's Essentials of Histology.

Collateral Reading. — Quain's Anatomy (10th edition). Lee's microscopist's Vade-mecum, Schiefferdecker and Kossel's Gewebelehre. Minot's Human Embryology. Marshall's Vertebrate Embryology.

PHYSIOLOGY.

Text-Books. — Foster's Text-book of Physiology. Martin, The Human Body. Kirke's Handbook of Physiology. Waller, Human Physiology.

Collateral Reading. — Fick, Compendium der Physiologie. Halliburton's Text-book of Chemical Physiology and Pathology. McGregor-Robertson's Elements of Physiological Physics. Landois' Manual of Human Physiology. Stirling's Practical Physiology.

MEDICAL CHEMISTRY.

Text-Books. — Tyson, Practical Examination of Urine. Wharton and Stillé's Medical Jurisprudence, Vol. II., on Poisons, (4th edition).

Collateral Reading. — Ultzmann and Hoffmann's Atlas der Harnsedimente. Roberts' Urinary and Renal Diseases. Neubauer and Vogel, Analysis of the Urine. Hoppe-Seyler, Physiologische Chemie. Taylor on Poisons. Wormley's Micro-Chemistry of Poisons. Halliburton's Text-book of Chemical Physiology and Pathology. Lea's Chemical Basis of the Animal Body (appendix to Foster's Text-book of Physiology).

THERAPEUTICS AND MATERIA MEDICA.

Text-Books. — White's Materia Medica and Therapeutics. United States Dispensatory.

Collateral Reading. — H. C. Wood's Therapeutics. Hare's Practical Therapeutics. Bartholow's Therapeutics. Brunton's Pharmacology, Therapeutics, and Materia Medica. Edes' Materia Medica and Therapeutics.

PATHOLOGY AND PATHOLOGICAL ANATOMY.

Text-Books. — Ziegler's Pathological Anatomy and Pathogenesis. Woodhead's Practical Pathology. Orth's Compend of Diagnosis in Pathological Anatomy.

Collateral Reading. — Friedlaender's Use of the Microscope in Clinical and Pathological Examinations. Cohnheim's Lectures on General Pathology.

OBSTETRICS.

Text-Books. — Lusk's Manual of Midwifery.

Collateral Reading. — Reynold's Practical Midwifery. Schroeder's Manual of Midwifery. Winckel's Diseases of Childbed. Schauta's Grundriss der operativen Geburtshilfe. Kucher's Puerperal Convalescence.

THEORY AND PRACTICE.

Text-Books. — Osler's Practice of Medicine.

Collateral Reading. — Strümpell's Text-Book of Medicine. Pepper's System of Practical Medicine by American authors. Eulenburg's Real-Encyclopädie der gesammten Heilkunde, 2^{te} aufl.

CLINICAL MEDICINE.

Text Books. — Strümpell's Text-Book of Medicine. Osler's Practice of Medicine. Flint's Practice of Medicine. DaCosta's Medical Diagnosis. Flint's Manual of Percussion and Auscultation.

Collateral Reading. — Pepper's System of Practical Medicine by American Authors. Pepper's American Text-books of the Theory and Practice of Medicine. Fagge's Practice of Medicine. Gowers' Diseases of the Nervous System. Cutler and Garland's Percussion Outlines.

GYNAECOLOGY.

Text-Books. — Thomas, on the Diseases of Women. Sixth Edition.

Collateral Reading. — Emmet's Principles and Practice of Gynaecology. Klob's Pathological Anatomy of the Female Sexual Organs. Savage, The Surgery, Surgical Pathology, and Surgical Anatomy of the Female Pelvic Organs. Davenport, on the Diseases of Women.

OPHTHALMOLOGY.

Text-Books. — Noyes, Nettleship, Williams, Fuchs, Swanzy.

Collateral reading. — Loring, on the Ophthalmoscope. Landolt, on Refraction and Accommodation.

OTOLOGY.

Text-Books. — Barr, Roosa, Burnett.

Collateral Reading. — Politzer, Diseases of the Ear. Schwartze, Chirurgische Krankheiten des Ohres.

DERMATOLOGY.

Collateral Reading. — Duhring, Hyde, Robinson, Crocker, Kaposi, Behrend, v. Ziemssen.

LEGAL MEDICINE.

Text-Books. — Taylor's Manual of Medical Jurisprudence.

Collateral Reading. — Ogston, Reese, Hofmann, Woodman and Tidy.

INSTRUCTION FOR 1893-94.

Anatomy.

Descriptive Anatomy. *Four times a week.* Professor DWIGHT. Recitations. *Once a week.* Dr. CONANT.

Practical Anatomy, with Exercises in Dissection. *Eight hours daily from October 15th till May.* Demonstrations. Drs. DEXTER, CONANT, MUNRO, BROOKS, C. A. PORTER, and TENNEY.

Topographical and Advanced Anatomy. *Once a week.* Professor DWIGHT. Topographical and Applied Anatomy. *Three times a week from November till May.* Assistant Professor M. H. RICHARDSON.

Histology and Embryology.

Histology. — Lectures. *Twice a week during the first half-year.* Professor MINOT. Laboratory Exercises. *Twice a week during the first half-year.* Professor MINOT, Drs. QUINCY, AMES, and E. M. GREENE.

Embryology. — Lectures. *Once a week during the second half-year.* Professor MINOT. Laboratory Exercises. *Three a week during the second half-year.* Professor MINOT, Drs. QUINCY and AMES.

Physiology.

Systematic and Experimental Physiology. *Four times a week during first half-year. Five times a week during second half-year.* Professor BOWDITCH.

Laboratory Exercises in Experimental Physiology. *Four times a week in sections.* Dr. DAVIS.

Chemistry.

Medical Chemistry. *Twice a week during second half-year.* Professor HILLS.

Clinical Chemistry. *Twice a week.* Professor WOOD.

Practical Exercises in the Laboratory *Daily.* Professors WOOD and HILLS, and Drs. WORCESTER, and OGDEN.

Hygiene.

Lectures and Demonstrations. *Once a week during the second half-year.* Dr. HARRINGTON.

Therapeutics and Materia Medica.

Lectures and Recitations. *Twice a week.* Dr. HARRINGTON.

Pathology and Pathological Anatomy.

General Pathology and Pathological Anatomy. *Twice a week.* Professor COUNCILMAN.

Special Pathological Anatomy, with Demonstrations. *Twice a week.* Professor COUNCILMAN.

Laboratory Exercises in Pathological Histology. *Twice a week.* Professor COUNCILMAN and Drs. WHITNEY, E. W. DWIGHT, PRESCOTT, and WRIGHT.

Practical Instruction in Performing Autopsies. *Throughout the year.* Professor COUNCILMAN and Dr. WHITNEY.

Surgery.

Surgery and Surgical Pathology. *Three times a week for three months; twice a week for five months.* Professor WARREN.

Application of Bandages and Apparatus. *Laboratory exercises to the class in sections during first half-year.* Drs. SCUDDER, and C. A. PORTER. *During the second half-year.* Dr. MIXTER.

Clinical Surgery.

Lectures. *Once a week till January.* Professor CHEEVER. *Once a week from October till March.* Professor PORTER. *Once a week from March till June.* Professor WARREN.

CLINICAL SURGERY.—THIRD CLASS.

Clinical Surgery Conference. *Once a week, from October till May.* Professor PORTER.

Clinical visits, *in sections of half the class, once a week throughout the year,* at the Massachusetts General Hospital, by Professors PORTER and WARREN, Assistant Professor M. H. RICHARDSON, and Drs. BEACH, HOMANS, and CABOT.—At the Boston City Hospital, by Assistant Professor BRADFORD, and Drs. GAY, BOLLES, POST, GAVIN, BURRELL, WATSON, and MONKS.

CLINICAL SURGERY.—SECOND CLASS.

In small sections daily in the Out Patient Departments of the Massachusetts General Hospital, by Drs. J. W. ELLIOT, F. B. HARRINGTON, MIXTER, CONANT, and SCUDDER.—At Boston City Hospital, by Drs. LOVETT, SMITH, and MUNRO.—At Carney Hospital, by Drs. MUNRO, P. THORNDIKE, and MUMFORD.

Clinical visits, *in sections of half the class, once a week throughout the year,* at the Massachusetts General Hospital and Boston City Hospital.

OPERATIVE SURGERY.

Operations are performed before the students one day each week throughout the year in the Amphitheatres at the Massachusetts General Hospital and Boston City Hospital.

Operative Surgery and Surgical Anatomy. *Exercises illustrated upon the cadaver twice a week in March and April.* Professor PORTER.

Operative Surgery, *Fifteen practical exercises by the students of the Third Class*, under the direction of Professor PORTER, assisted by Drs. MIXTER, CONANT, MONKS, ELLIOT, F. B. HARRINGTON, BURRELL, WATSON, and SCUDDER.

The Surgical Cases at the Eye and Ear Infirmary and at the Boston Dispensary are shown by the surgeons in charge.

Ophthalmology.

Ophthalmology. *Once a week for four months.* Professor WADSWORTH.

Clinical Ophthalmology. *Four times a week for three months.* Professor WADSWORTH and Dr. STANDISH.

Dermatology.

Diseases of the Skin. *Once a week.* Professor WHITE.

Clinical Dermatology. *Once a week.* Professor WHITE.

Syphilis.

Practical Diagnosis and Treatment of Syphilis. *Once a week for a half-year.* Dr. POST.

Otology.

Otology. *Twice a week, October, November, and December.* Professors BLAKE and GREEN.

Clinical Otology. *Once a week in January, February, and March.* Professors BLAKE and GREEN.

Theory and Practice of Physic.

Lectures. *Twice a week.* Professor FITZ. Clinical lectures. *Twice a week.* Professor FITZ. Recitations. *Twice a week.* Dr. CUTLER.

Clinical Medicine.

THIRD CLASS.

Three times a week. Professor SHATTUCK. *Twice a week.* Professor MASON.

Clinical Conference. *Once a week.* Professors SHATTUCK, and MASON, and Drs. VICKERY, and JACKSON.

SECOND CLASS.

Clinic. *Once a week.* Dr. VICKERY. *Once a week.* Dr. WITHINGTON.

Practical Instruction in Auscultation and Percussion. *Six times a week during the first half-year.* Drs. GANNETT, V. Y. BOWDITCH, H. JACKSON, and SEARS. *During the second half-year.* Professor MASON, and Drs. GANNETT, VICKERY, and WITHINGTON.

Practical Diagnosis and Treatment of Diseases of the Nervous System. *Once a week.* Professor PUTNAM. *Once a week.* Dr. WALTON.

Mental Diseases. *Once a week.* Dr. FISHER.

Medical visits are made at the Massachusetts General Hospital by Professors FITZ, W. L. RICHARDSON, and SHATTUCK, and Drs. CUTLER and GANNETT.—At the City Hospital, by Professors ROTCH and MASON, and Drs. J. G. BLAKE, G. B. SHATTUCK, FORSTER, and FOLSOM.—At the Danvers, South Boston, and Somerville Hospitals for the Insane.—The Medical Cases at the Boston Dispensary are shown by the physicians in charge.

Laryngoscopy and Rhinoscopy.

Practical Diagnosis and Treatment. *Three times a week.*

Diseases of Children.

Practical Diagnosis and Treatment. *Twice a week.* Professor ROTCH.

Paediatrics. *Once a week, March and April.* Professor ROTCH.

Clinical Conference. *Once a week.* Professor ROTCH and Drs. BUCKINGHAM and WENTWORTH.

Legal Medicine.

Twice a week during the first half-year. Professor DRAPER.

Obstetrics.

Theory and Practice of Obstetrics. *Twice a week.* Professor WM. L. RICHARDSON. Recitations. *Once a week.* Dr. C. M. GREEN.

Operative Obstetrics. *Twelve practical exercises.* Dr. C. M. GREEN.

Practical Instruction in Clinical Obstetrics. *Throughout the year.* Drs. C. M. GREEN, REYNOLDS and TOWNSEND.

Obstetrical Conference. *Once a week after January 1st.* Professor WM. L. RICHARDSON and Drs. C. M. GREEN, REYNOLDS, and TOWNSEND.

Gynaecology.

Twice a week. Professor BAKER. Two clinics each week during the second half-year. Professor BAKER. Two clinics each week during the first half-year. Dr. DAVENPORT.

Bacteriology.

Eighteen lectures in second half-year. Assistant Professor ERNST.

Practical Laboratory Work. *Eighteen hours for each student in the second half-year.* Assistant Professor ERNST.

INSTRUCTION FOR 1893-94 TO STUDENTS OF THE FOURTH YEAR.

Clinical Medicine.

Once a week for seven months. DR. GANNETT. *Once a week for three months.* DR. VICKERY.

Diseases of Children.

Twice a week at Children's Hospital for three months and special clinical exercises. PROFESSOR ROTCH and DR. BUCKINGHAM.

Diseases of the Nervous System.

Twice a week for four months. DR. WALTON. *Twice a week for four months.* DR. KNAPP.

Mental Diseases.

Twice a week for four months. DR. FISHER. *Once a week for three months.* DR. COWLES.

Surgery.

Clinical Surgery. *Twice a week for two months.* DR. GAY. *Twice a week for three months.* DR. BURRELL.

Operative Surgery. *Practical Exercises.* PROFESSOR PORTER, ASSISTANT PROFESSOR M. H. RICHARDSON, and Drs. MIXTER and MONKS.

Orthopedic Surgery. *Twice a week for two months.* ASSISTANT PROFESSOR BRADFORD.

Ovarian Tumors.

Once a week for two months. DR. HOMANS.

Obstetrics.

Clinical Obstetrics. *Twice a week for four months.* PROFESSOR WM. L. RICHARDSON.

Operative Obstetrics. *Practical Exercises.* DR. C. M. GREEN.

Gynaecology.

Twice a week for eight months. PROFESSOR BAKER. *Twice a week for three months.* DR. DAVENPORT. *Twice a week for eight months.* DR. SWIFT.

Operative Gynaecology. *Practical Exercises.* PROFESSOR BAKER.

Dermatology.

Twice a week for eight months. PROFESSOR WHITE.

Syphilis.

Twice a week for four months. DR. GREENOUGH.

Ophthalmology.

Twice a week for eight months. PROFESSOR WADSWORTH. *Twice a week for four months.* DR. CHENEY.

Otology.

Three times a week for eight months. PROFESSORS C. J. BLAKE and J. O. GREEN.

Laryngology.

Three times a week for three months.

Diseases of the Genito-Urinary Apparatus.

Once a week for four months. DR. CABOT. *Once a week for three months.* DR. WATSON.

Legal Medicine.

Three times a week during the first half-year. PROFESSOR DRAPER.

Hygiene.

Twice a week for two months. DR. DURGIN.

Pathological Anatomy.

Once a week for six months. DR. WHITNEY.

Bacteriology.

Eighteen lectures in the first-half year. ASSISTANT PROFESSOR ERNST.

Cookery.

Twice a week (two hours) for one month. BOSTON COOKING SCHOOL.

CLINICAL ADVANTAGES.

The Medical Department of the University is established in Boston, in order to secure those advantages for Clinical Instruction and for the study of Practical Anatomy which are found only in large cities.

There are Hospital visits or operations daily.

The Massachusetts General Hospital.— During the past year, 3325 patients were treated in the wards, and 19,190 in the out-patient departments. Patients are received from all parts of the United States and

the Provinces, and are visited by the students, with the attending physicians and surgeons, on four days in the week. Operations are numerous, and are performed in the amphitheatre, which is provided with seats for 400 persons. Clinics in the following special branches have been established in connection with the out-patient department: Dermatology, Laryngology, Diseases of the Nervous System, and Ophthalmology.

The City Hospital.—During the past year, 8236 cases were treated in its wards, and 14,485 in its various out-patient departments. The medical wards always contain many cases of acute diseases, and changes are taking place constantly. The opportunities for seeing fractures, injuries, and traumatic cases of all kinds are excellent, since, on an average, 800 street accidents are yearly treated. Surgical operations are performed in the amphitheatre. Diseases of the eye, the ear, and the skin are largely treated in the out-patient department. Clinical instruction is given by the physicians and surgeons twice a week.

In these two hospitals, the facilities for witnessing Operative Surgery are unsurpassed. Twice a week operations are performed in the presence of the class. The number of these operations is large, reaching nearly two thousand a year. The variety is great, embracing every surgical disease and injury, including the surgical operations on the eye and ear.

The Boston Lying-in Hospital.—More than five hundred patients are annually confined in the Hospital. In the out-patient department, over a thousand cases are annually attended by the hospital externes who are appointed from the third and fourth year students. Clinical instruction is given in these cases by the physicians to out-patients and the House Physicians.

The Boston Dispensary.—42,116 patients were treated at this Public Charity during the past year. A new building has lately been erected at a cost of \$50,000, where students have ample and excellent opportunity for seeing practical work in the diagnosis and treatment of cases illustrating the various branches of medicine and surgery.

The Massachusetts Charitable Eye and Ear Infirmary.—The fourteen thousand patients annually treated at this institution present every variety of disease of the ear and eye, and supply a large number of operations.

The Marine Hospital at Chelsea receives from the shipping of the port a large number of patients, who furnish examples of the diseases of foreign countries and of distant parts of the United States. Many cases of venereal disease, in its various forms, are treated annually.

The Free Hospital for Women.—In the wards of this institution, which is devoted exclusively to the diseases peculiar to women, abundant opportunity is offered to study the severer forms of uterine disease, and to wit-

ness operations which are performed twice a week throughout the year. In the out-patient department, where over 5000 patients are annually treated, every advantage is given the student to observe the less serious forms of disease and witness a large amount of minor gynaecological surgery.

Students are also permitted to visit the Children's Hospital and the Carney Hospital on application to the physicians on duty.

There are twenty-five appointments annually for Internes in the various hospitals, and as many more for Assistants in the out-patient departments. Appointments for the Massachusetts General and City Hospitals are for the term of eighteen months, for the Boston Lying-in Hospital for six months, and for the Free Hospital for Women for nine months.

EXAMINATIONS.

The regular examinations are conducted in writing and orally, and are (with a few exceptions) held at the end of each year in June, and a week before the opening of the School in September, on the studies of the preceding year.* In some branches a portion of the examination consists of practical work in the laboratory. They will be held in the following order in the graded four years course beginning with the year 1892-93:—

First Year.—Anatomy (2 hrs.), Physiology (3 hrs.), Histology † (1 hr.), Medical Chemistry (1½ hr.), Bacteriology (1 hr.).

Second Year.—Advanced Anatomy (2 hrs.), Pathological Anatomy (3 hrs.), Clinical Chemistry (2 hrs.), Materia Medica and Therapeutics (2 hrs.).

Third Year.—Theory and Practice (3 hrs.), Surgery (3 hrs.), Obstetrics (3 hrs.), Paediatrics (2 hrs.), Dermatology (1 hr.), Neurology (1 hr.), Gynaecology (1 hr.), Mental Diseases (1 hr.).

Fourth Year.—Clinical Medicine (3 hrs.), Clinical Surgery (2 hrs.), Orthopedics (1 hr.), Ophthalmology † (1 hr.), Otology † (1 hr.), Laryngology † (1 hr.), Legal Medicine † (1 hr.), Syphilis † (1 hr.).

Electives.—Gynaecology (2 hrs.), Dermatology (2 hrs.), Neurology (2 hrs.), Ophthalmology (2 hrs.), Otology (2 hrs.), Orthopedic Surgery (2 hrs.), Physiology (1 hr.), Chemistry (1 hr.), Operative Surgery (1 hr.), Operative Obstetrics † (1 hr.), Bacteriology † (1 hr.), Hygiene † (1 hr.).

‡ In addition to the above examinations each student is required to

* The June examination is for those only who are members of the School at the time, and for those entitled to apply for the degree.

† The examinations in these subjects will be held at the end of the first half-year.

‡ This paragraph applies to examinations in both courses of study.

present a satisfactory report of the analysis of a specimen of urine, to examine and report upon a clinical case in Medicine and Surgery, and to take charge of and report upon six cases in Obstetrics; each student must also have dissected the three parts of the body to the satisfaction of the Demonstrator, and no student shall be admitted to the examination on Anatomy at the end of the first year who has not so dissected two parts, nor to that at the end of the second year who has not so dissected three parts, unless excused by the Professor of Anatomy.

In the fourth year, at least three hours of examination in electives are obligatory.

Students intending to elect Dermatology, Neurology, or Gynaecology in the fourth year need not pass an examination in these subjects at the end of the third year, provided their choice is made at the beginning of the second half of the third year.

Students electing Ophthalmology, Otology, or Orthopaedics in the fourth year are obliged to pass only the two-hours examination in these subjects at the end of the year. Only one hour of these two can count as an elective.

Candidates for the degree who shall have served satisfactorily as internes in the Massachusetts General hospital, Boston City Hospital, Carney Hospital, and Children's Hospital, for a period of not less than one year, may be exempt from examination in the electives of the fourth year.

* No student is allowed to anticipate the examinations in the regular course of studies of his year, except by special permission of the Faculty. Those who fail in any subject may again present themselves in that subject at the next regular examination.

* After two failures to pass in any subject a charge of \$3. will be made for each subsequent examination in that subject.

The following is the order of the examinations and the rules governing the examinations for those who were members of the school previous to the year 1892-93, and who are not pursuing the graded four years course of study:—

End of Third Year.—Obstetrics,† Theory and Practice of Medicine, Clinical Medicine, Surgery,‡ Clinical Surgery; and, in addition, each candidate will be required to take examinations, amounting to two (2) hours, and chosen from the following list of elective studies, at the commencement of the year; the choice thus made is to be final. One two-hour course or two one-hour courses are to be taken, as follows:—

* This paragraph applies to examinations in both courses of study.

† See foot-note on page 389.

‡ The examinations in Obstetrics and Surgery may be passed at the end of the fourth year if preferred.

Ophthalmology (1 hr.), Otology (1 hr.), Dermatology (2 hrs.), Diseases of Nervous System (2 hrs.), Diseases of Children (2 hrs.), Mental Diseases (1 hr.), Gynaecology (2 hrs.), Legal Medicine* (1 hr.), Bacteriology (1 hr.).

End of Fourth Year. — Each candidate must pass examinations amounting to ten (10) hours, chosen from the following list of studies, the choice to be made at the commencement of the year and to be regarded as final:—

Ophthalmology* (2 hrs.), Dermatology (2 hrs.), Otology (2 hrs.), Laryngology (1 hr.), Gynaecology (2 hrs.), Diseases of Children* (2 hrs.), Diseases of Nervous System (2 hrs.), Mental Diseases (1 hr.), Clinical Obstetrics (2 hrs.), Operative Obstetrics (1 hr.), Operative Surgery (1 hr.), Legal Medicine* (1 hr.), Hygiene (1 hr.), Bacteriology (1 hr.).

The above courses are entirely distinct from third-year courses of the same title; and in addition there will be given clinical and laboratory courses in Orthopedic Surgery, Genito-urinary Diseases, Syphilis, Ovarian Tumors, Clinical Microscopy, Preparation of Food for Infants and Invalids; in these courses no examination is required.

House-officers in the Massachusetts General Hospital, Boston City Hospital, Carney Hospital, McLean Hospital, Boston Lunatic Hospital, Massachusetts Charitable Eye and Ear Infirmary, Boston Children's Hospital, Cambridge Hospital, and Free Hospital for Women may obtain the fourth-year degree by entering the fourth class, passing an examination in the electives amounting to five (5) hours, and presenting a certificate of satisfactory performance of duty in the Hospital for a period equivalent to the School year, and an acceptable thesis or clinical report based upon observations made during their service. On account of the shorter services in the Lying-In Hospital and Adams Nervine Asylum internes of these institutions will be required to pass an aggregate of seven (7) hours examination and present a certificate and thesis as above.

Medical students who desire to devote their fourth year of study mainly to advanced work in any of the laboratories of the School may obtain the fourth-year degree upon passing examinations in the elective studies aggregating five (5) hours, and presenting an acceptable thesis based on the laboratory work actually done.

Students attending the four years' course may be examined at the end of the third or fourth year, as preferred, in Clinical Medicine, Clinical Surgery, and Obstetrics. The examinations of the first two years are common to both groups of students. The final examinations at the close of the three years' course are in the following subjects: Therapeutics,

* The examination in these subjects will be held at the end of the first half-year.

Obstetrics, Surgery and Clinical Surgery, Theory and Practice, and Clinical Medicine, with electives as described on the previous page.

The regular examinations for the year 1893-94 will begin June 6 and September 24.

DIVISION OF STUDENTS.

Students are divided into four classes, according to their time of study and proficiency, and during their last year will receive largely increased opportunities of instruction in the special branches mentioned. Students who began their professional studies elsewhere may be admitted to advanced standing; but all persons who apply for admission to the advanced classes must pass an examination in the branches already pursued by the class to which they seek admission, and furnish a satisfactory certificate of time spent in medical studies. No student may advance with his class, or be admitted to advanced standing, until he has passed the required examinations in the studies of the previous year, or a majority of them; nor may he become a member of the third class, until he has passed all the examinations of the first, in addition to a majority of those of the second year; nor of the fourth class, until he has passed all of the examinations of the first and second, in addition to a majority of those of the third year.

In order that the time of study shall count as a full year, students of all classes must present themselves within the first week of the School year and register their names with the Secretary.

Any student may obtain a certificate of his period of connection with the School.

LIBRARIES.

The students have access, free of charge, to the books belonging to the library of the School and to the libraries of the several departments.

The College Library at Cambridge is open to the students of the Medical School.

The Boston Public Library, which contains a large collection of medical books, is open to students who are inhabitants of Boston. Students, not inhabitants of Boston, who have filed a bond at the Treasurer's office, or deposited with the Treasurer the sum of fifty dollars, may also use this library.

REQUIREMENTS FOR A DEGREE.

Every candidate must be twenty-one years of age, and of good moral character; must give evidence of having studied medicine at least three full years; have spent at least one continuous year at this School; and have passed the required examinations.

At the end of the four years of study the degree of Doctor of Medicine will be given to those students who have fulfilled its requirements. This degree *cum laude* will be given to candidates who have obtained an average of over seventy-five per cent* in all the required examinations.

The presentation of a thesis is not a requirement for graduation, but candidates for the degree of M.D. may present a voluntary thesis. If of conspicuous merit, it will receive honorable mention; if also of a suitable character, it may be read at the University Commencement exercises. Theses must be completed and delivered to the Dean on or before the first day of June.

The degree of Master of Arts is open to graduates of the School who are also Bachelors of Arts of Harvard College, and to Bachelors of Arts of other Colleges who shall be recommended by the Faculty of Harvard College. Candidates must pursue an approved course of study in Medicine for at least one year after taking the degree of Doctor of Medicine.

ANATOMICAL PRIZE.

Professor C. B. PORTER offers a prize of fifty dollars, open to all students, and graduates of not more than five years' standing, except teachers of anatomy, for the best dissection deserving the award illustrative of surgical anatomy, the specimen to be presented to the Museum.

OTOLOGY PRIZE.

For the best preparation illustrating the osseous anatomy of the ear or for the best thesis showing original work on an otological subject, in alternate years, the sum of twenty-five dollars, open to third-year students.

PECUNIARY AID.

FELLOWSHIPS AND SCHOLARSHIPS.

BULLARD FELLOWSHIPS. In 1891, Mr. William S. Bullard gave the sum of fifteen thousand dollars for the establishment of three fellowships of five thousand dollars each "in memory of three physicians who were distinguished for their honorable personal character and for their professional services in this community." Accordingly the three following fellowships were established with a yearly income of \$225 each:—

THE GEORGE CHEYNE SHATTUCK MEMORIAL FELLOWSHIP.

THE JOHN WARE MEMORIAL FELLOWSHIP.

THE CHARLES ELIOT WARE MEMORIAL FELLOWSHIP.

The income from any one or all of these fellowships may be paid to any student or member of the medical profession who shall be selected by

* In computing averages all examinations will be reduced to a basis of three hours.

the Faculty of the Medical School to make such original investigations in Medical Science, as in their opinion will be most useful to the profession and the community.

BARRINGER SCHOLARSHIPS. Two, known as the Edward M. Barringer Scholarship No. 1, and the Edward M. Barringer Scholarship No. 2, and having a yearly income of \$300 and \$200 respectively, from a bequest of Edward M. Barringer will be awarded to deserving students, preferably those of the fourth class.

DAVID WILLIAMS CHEEVER SCHOLARSHIP, with an income of \$200. Founded by David Williams Cheever, M.D., of Boston in 1889. To be awarded to a poor and meritorious student of the first year only, after three months probation in the Medical School.

ISAAC SWEETSER SCHOLARSHIP. Founded in 1892 by Mrs. Anne M. Sweetser. The income of \$250 to be "devoted to the aid of poor students of ability who would not otherwise be able to continue the studies necessary for their profession."

CLAUDIUS M. JONES SCHOLARSHIP, with an income of \$250, from a bequest of six thousand dollars by Dr. Claudius M. Jones.

ORLANDO W. DOE SCHOLARSHIP. One-half the income from the bequest of Dr. Orlando W. Doe of five thousand dollars, amounting to \$100 "to be given annually as a scholarship to a deserving student in the Medical department."

FACULTY SCHOLARSHIPS. Four, with an income of \$200 each, have been established by the Faculty, and are open to meritorious students who have been at the School for at least one year. Only those students needing assistance are expected to apply; and of such, those holding the highest rank will have the preference. Holders of scholarships may be required to render assistance in laboratory courses to an amount not exceeding four hours per week.

The income of the John Foster Fund, amounting to about one hundred and fifty dollars, is payable every other year to one or more meritorious students needing assistance.

FEES AND EXPENSES.

For matriculation, five dollars; for the first three years, two hundred dollars for each year (if in two payments, at the first, one hundred and twenty dollars; at the second, eighty dollars); for a half-year alone, one hundred and twenty dollars; the fee for the full year to all students entitled to be classified as fourth-year students will be one hundred dollars; for graduation, thirty dollars. During the first two years there are the following additional expenses: Two dollars for each of the three parts required for dissection; and four dollars per year for chemical material,

in addition to the charge for breakage of glass apparatus. Of students who do not pay in advance, a bond for \$300, executed by two sufficient bondsmen, one of whom must be a citizen of the United States, is required. A copy of such bond will be sent, on application to the Secretary of the Faculty, and all students are recommended to deposit such a bond. To students depositing bonds, term-bills will be presented one week before the end of the first term, to be paid within two weeks; and also one week or more before Commencement, to be paid on or before the beginning of the next academic year. Such students will be held responsible for the payment of fees until they have notified the Dean of their intention to withdraw from the School, and have subsequently received their bond from the Treasurer.* Whenever a student is obliged to withdraw from the School before the last four weeks of a half-year for no misdemeanor, but for good and sufficient reason, to be determined in all cases by the Faculty, it shall be recommended that he be entitled to a remission of three-fourths of the amount due for that portion of the time during which he receives no instruction—this remission to date from the reception by the Dean of a written notice of the student's withdrawal from the School. No degree can be conferred till all dues to the School are discharged. The student's general expenses may be reduced, in accordance with his means, to the standard which prevails in other cities. The janitor of the Medical School will always have a list of boarding-houses in the vicinity of the School building, varying in their rates of charges from five to ten dollars a week.

COURSES OF STUDY FOR GRADUATES.

The Faculty has arranged a greatly enlarged and improved plan of instruction for graduates, embracing nearly all the branches of practical and scientific medicine. It is designed to supply those opportunities for clinical and laboratory study which have hitherto been sought in Europe by young graduates and practitioners.

The new and extensive laboratories of the School are inferior to none in America, and the clinical advantages afforded by the hospitals of Boston furnish abundant material for all purposes of instruction. The following are the principal institutions:—

Massachusetts General Hospital,	Boston Lying-in Hospital,
Boston City Hospital,	The Children's Hospital,
Boston Dispensary,	McLean Hospital (for the Insane,)
Massachusetts Eye and Ear Infirmary,	Boston Lunatic Hospital,
Free Hospital for Women,	The Carney Hospital.

* The Treasurer's office is at 50 State St., Boston.

Instructors in the Medical School are members of the medical and surgical staffs of these institutions, and students are admitted to all of them under their immediate supervision.

Instruction in the graduate courses is entirely distinct from that of the undergraduate department of the School; but students of the former will be admitted also to all the regular lectures (not clinical) of the latter without extra charge during their connection with the School.

Instruction will be conducted in small classes and under the personal direction of the heads of departments. The courses will be mostly of eight weeks' duration, and the practitioner will be able during a brief residence to take one or several of them. Those desiring to study a specialty may pursue long, continuous courses in any single branch at reduced rates.

Instruction will be given throughout the academic year, October to June.

A certificate of attendance will be furnished when desired.

FEES.

The fees for the separate courses in the several departments vary with the courses.

Fee for two months' attendance upon all the courses,	\$100.
“ “ four months’ “ “ “ “	150.
“ “ attendance throughout the academic year “ “ “	200.

An extra fee is required for the use of material in laboratory, dissecting and operative courses. Matriculation, \$5.

All fees are payable in advance to the Treasurer of the University, 50 State Street, Boston.

LIST OF COURSES.

Anatomy. — The following courses are offered: —

1. The Anatomy of the Joints, illustrated by preparations, frozen sections, and the live model.
2. The Anatomy of the Central Nervous System, including Cerebral Localization and the Course of Fibres. Illustrated by preparations, models, plates, and diagrams.
3. Applied Anatomy demonstrated on the cadaver, including Surface Anatomy.
4. A Dissection Course.

Histology and Embryology. — The following courses are offered: —

1. A course on Human Embryology.
2. Normal Histology.
3. Histological Technique.

Physiology. — Opportunities for carrying on original investigations in the Physiological Laboratory, which is well provided with apparatus for original research, including recording instruments of various sorts, induction coils, interrupters, galvanometers, constant temperature apparatus, photographic outfit, artificial respiration apparatus, etc.

Medical Chemistry. — Practical instruction in the Chemical Laboratory, in physiological chemistry, in the analysis of the urine and other animal fluids in health and disease, and of poisons; examination of blood-stains and other objects connected with medico-legal investigations, with the application of the microscope to these processes.

Pathological Anatomy. — The courses in Pathological Anatomy will consist of —

- (1) Demonstrations of Morbid Material, and Practice in the Method of Post-mortem Examinations.
- (2) Exercises in Pathological Histology.
- (3) Instruction in Clinical Microscopy.
- (4) Laboratory Opportunities for Special Investigations.

Each course will last eight weeks, and instruction will be continuous throughout the academic year from October to June.

Experimental Pharmacology and Therapeutics. — The aim of this laboratory is to give to graduates facilities for original research and experiment. Those who wish to undertake some special investigation will find here the apparatus and accessories for carrying on their work to the best advantage.

Clinical Medicine. — Instruction in Clinical Medicine will consist of 4 courses of from 12 to 20 exercises, which will be fully illustrated by cases in the wards of the Massachusetts General and Boston City Hospitals, and at the Boston Dispensary.

Surgery. — Ten courses, including Minor, Clinical, Genito-urinary, and Orthopedic Surgery, are offered at the Massachusetts General, Boston City, and Children's Hospitals.

Obstetrics. — Clinical instruction in Obstetrics will be given in the wards of the Boston Lying-in Hospital on two mornings of the week during the months of November and December, February and March, and April and May. Special attention will be given to the management of conva-

lescence after confinement, and opportunity will be given to witness labor cases and operations in the Hospital. Each course will last two months.

An abundance of out-patient cases of Obstetrics will be furnished.

Practical instruction in Operative Obstetrics on the cadaver will be given at the Medical School, consisting of ten daily exercises.

Dermatology. — Instruction in Diseases of the Skin will be given at the Skin Department of the Massachusetts General Hospital. Over two thousand cases are treated at this clinic yearly, which come from the New England States generally and the British provinces, and present many examples of the rare forms of cutaneous affections.

Each course will last eight weeks, and instruction will be continuous throughout the academic year, from October to June inclusive. Graduates will have opportunity for the closest examination of patients. They may also attend the systematic course of lectures on Dermatology. A large collection of Baretta's models of skin disease is open to their inspection in the Museum of the School.

Ophthalmology. — Instruction will be given at the Massachusetts Charitable Eye and Ear Infirmary, the Boston City Hospital, and the Massachusetts General Hospital. The courses will be of eight weeks duration, and mainly clinical.

Otology. — The instruction in this department will be given at the Massachusetts Charitable Eye and Ear Infirmary and at the Boston City Hospital. Each course of eight weeks' duration will include, in addition to the exhibition and explanation of cases, practical instruction in examination and diagnosis, and a systematic review of the anatomy, physiology and diseases of the ear.

The Infirmary, 176 Charles Street, offers unusual facilities for the study of ear diseases in its very large clinic, more than three thousand aural cases being treated annually. It is fully provided with receiving, operating, and lecture rooms, severe cases and those requiring serious operations being provided with beds in the house and skilled nursing.

At the City Hospital, Harrison Avenue, many of the most important operations on the ear are performed, and in addition its general and contagious wards of more than four hundred beds afford unusual opportunities for studying the aural complications of general diseases, more especially of the exanthemata, as large numbers of cases of typhoid fever, diphtheria, scarlet fever, and measles are received here every year. The courses will consist of twenty-four exercises of one hour or more each.

Gynaecology. — Instruction in Diseases of Women will be given at the Free Hospital for Women and the Boston Dispensary. The wards of the first-named Hospital afford opportunities for the study of the severer forms of uterine disease, while the Out-Patient Department of both institutions supplies abundant material for the education of the touch, and the diagnosis

and treatment of all minor gynaecological diseases. There will be eight courses of from 12 to 24 exercises.

Graduates may also attend the course of lectures at the Medical School.

Provided six or more graduates desire an operative course, in which they may take part in the performance of the various gynaecological operations upon the cadaver, as well as acquire greater familiarity with the instruments used in minor Gynaecology, such instruction will be given from 7 till 9 P.M. each evening during the last two weeks of each of the previous courses.

Neurology. — Courses of from 12 to 24 lectures each will be given on Diseases of the Nervous System, at the Out-Patient Department of the Massachusetts General Hospital. The material afforded by this clinic, which receives patients from all over New England, is ample; the Department is well provided with means for the investigation of cases; the courses will be abundantly illustrated by diagrams and microscopic preparations as well as by the exhibition of patients, and will include instruction in the use of electricity in diagnosis and treatment.

Mental Diseases. — Instruction in Mental Diseases will be given at the McLean Hospital for the Insane during February and March. The daily average number of patients is 169.

Diseases of Children. — Instruction in Diseases of Children will be given at the City Hospital, Children's Hospital, Infant Hospital and West End Nursery, Boston Dispensary (Children's Room), throughout the year.

The material which can be made use of in this course is very large in amount, comprising not only the more common forms of disease met with by the physician in his every-day practice, but also the rare forms.

The new wards at the City Hospital, built especially for the reception of cases of scarlet fever and diphtheria, offer exceptional advantages for studying the diagnosis and treatment of these diseases.

Legal Medicine. — Instruction in Legal Medicine will be given at the City Hospital. Each course will last eight weeks, and instruction will be continuous throughout the academic year from October to June.

Hygiene. — Practical instruction will be given in the Laboratory at the Medical School in the analysis of air, water, soils, and of articles of food and drink for adulterations. Opportunities will also be afforded for special work. Attention will also be given to the sanitary inspection of houses, public buildings, and premises of offensive trades, and to the investigation of ventilation, plumbing, etc.

Bacteriology. — The courses in Bacteriology will consist of instruction in the methods of research, together with opportunities for original investigation. The means of illustration and facilities for work are those of a well-equipped laboratory.

COURSES IN THE GRADUATE DEPARTMENT.

SUBJECT.	INSTRUCTOR.	PLACE.	TIME.	FEE.
1. Anatomy of the Joints	Dr. Dwight	Medical School	Oct., Nov.	\$25.
2. Dissection Courses	Dr. Dexter	Medical School	After Nov.	20.
3. Special Anatomy. Instruction	Dr. Dwight	Medical School	Special *	Special.*
4. Embryology	Dr. Minot	Medical School	Special *	25.
5. Histology	Dr. Minot	Medical School	Special.* Nov.—Apr.	25.
6. Physiology	Dr. Bowditch	Medical School	Special *	Special.*
7. Medical Chemistry	Dr. Wood	Medical School	Special *	Special.*
8. Clinical Microscopy	Dr. Whitney	Medical School	Special *	Special.*
9. Clinical Medicine	Dr. Mason	City Hospital	15.	15.
10. Clinical Medicine	Dr. Jackson	Boston Dispensary	Nov., Dec., Jan.	15.
11. Clinical Medicine	Dr. Ernst	Massachusetts General Hospital	Feb., March, Apr., May	15.
12. Surgery	Dr. M. I. Richardson	Massachusetts General Hospital	Oct.	20.
13. Orthopedic Surgery	Dr. Bradford	Children's Hospital	Oct.	15.
14. Surgery	Dr. Homans	Massachusetts General Hospital	March, Apr.	20.
15. Surgery	Dr. F. B. Harrington	Massachusetts General Hospital	Nov., Dec.	15.
16. Genito-urinary Surgery	Dr. Cabot	Massachusetts General Hospital	Oct.	15.
17. Surgery	Dr. Gay	City Hospital	Apr., May	15.
18. Minor Surgery	Dr. Munro	City Hospital	Apr., May, June*	Special.*
19. Minor Surgery	Dr. Mixer	Massachusetts General Hospital	March, Apr., May*	Special.*
20. Genito-urinary Surgery	Dr. Watson	City Hospital	Dec., Jan., Feb., March*	Special.*
21. Obstetrics	Dr. W. L. Richardson	Lying-in Hospital	Nov., Dec., Apr., May*	20.
22. Obstetrics	Dr. C. M. Green	Lying-in Hospital	Jan., Feb., March*	20.
23. Practical Obstetrics	Drs. Reynolds and Townsend	Lying-in Hospital	Special *	20.
24. Operative Obstetrics	Dr. C. M. Green	Medical School	Special *	25.
25. Dermatology	Dr. White	Massachusetts General Hospital	Special *	25.
26. Oology	Dr. J. O. Green	Infirmary	Oct., Nov.*	25.
27. Oology	Dr. Blake	Infirmary	Feb., March, Apr., May*	25.
28. Oology	Dr. Bryant	Infirmary	Dec., Jan.*	25.
29. Ophthalmology	Dr. Wadsworth	City Hospital	Special *	Special.*
30. Ophthalmology	Dr. Standish	Infirmary	Dec., Jan.*	Special.*
31. Ophthalmology	Dr. Cheney	Massachusetts General Hospital	Feb., March *	Special.*
32. Gynaecology	Drs. Baker and Swift	Women's Free Hospital	Special *	25.
33. Gynaecology	Dr. C. M. Green	City Hospital	Special *	Special.*
34. Gynaecology	Dr. Davenport	City Hospital	Special *	Special.*
35. Laryngology	Dr. Farlow	Boston Dispensary	Special *	15.
36. Neurology	Dr. Putnam	Massachusetts General Hospital	Special *	20.
37. Neurology	Dr. Knapp	City Hospital	Special *	10.
38. Mental Diseases	Dr. Cowles	McJean Hospital	Special *	20.
39. Diseases of Children	Dr. Buckingham	City Hospital and Children's Hosp.	Special *	20.
40. Legal Medicine	Dr. Draper	City Hospital	Special *	25.
41. Hygiene	Dr. C. Harrington	Medical School	Special *	25.
42. Bacteriology	Dr. Ernst	Medical School	Feb.—May	25.

* Fee and time will be arranged with instructor.

Those pursuing these courses may elect the studies to which they will give their attention, and allot the time they will devote to each. They will be exempt, unless at their option, from examinations, and may obtain a certificate of attendance on the courses pursued. On payment of the full fee for the year, they will have the privilege of attending any of the other exercises of the Medical School, the use of its laboratories and library, and all other rights accorded by the University.

A series of lectures on special subjects will be given on Wednesday evenings from October till May. These lectures are open to all members of the profession.

Graduates of other medical schools may obtain the degree of M.D. at this University, after a year's study in the graduates' course and passing the required examinations, which may be passed at such times as may be agreed upon by the examiners and the graduate student.

For further information and full description of the courses and lectures for graduates, address Dr. WILLIAM L. RICHARDSON, *Dean*, Harvard Medical School, Boylston Street, Boston, Mass.

SUMMER COURSES.

During the summer of 1894 courses in many branches of practical and scientific medicine will be given by some of the teachers of the School. These courses will be clinical in character and will be given at the Hospitals and Dispensaries by the physicians and surgeons on duty. Practical instruction will also be given in several of the Laboratories at the School by the instructors in charge.

A detailed list of the Summer Courses will soon be announced. For further information address Dr. WILLIAM L. RICHARDSON, *Dean*, Harvard Medical School, Boylston Street, Boston, Mass.

BOYLSTON MEDICAL PRIZES.

These prizes, open to public competition, are offered annually for the best dissertations on questions in medical science proposed by the Boylston Medical Committee.

At the annual meeting of 1893 a prize of two hundred dollars was awarded to Drs. Wm. E. Hughes, and Wm. S. Carter, of Philadelphia, for an essay entitled *A Clinical and Experimental Study of Uraemia*.

For 1894 two prizes are offered:—

1. A prize of two hundred dollars for the best dissertation embodying *The results of Original Work in Anatomy, Physiology, or Pathology*. The subject to be chosen by the writer.

2. A prize of one hundred dollars for the best dissertation on *The Relations of the Ray Fungus (Actinomycosis) to Chronic Inflammatory Processes*.

Dissertations on these subjects must be sent post-paid to W. F. WHITNEY, M.D., Harvard Medical School, Boston, Mass., on or before *Wednesday, April 4, 1894*.

For 1895 two prizes are offered:—

1. A prize of one hundred and fifty dollars for the best dissertation on *The results of Original Work in Anatomy, Physiology or Pathology*. The subject to be chosen by the writer.

2. A prize of one hundred and fifty dollars for the best dissertation on *The Significance of Quantitative Determinations of the Urinary Constituents in Disease*.

Dissertations on these subjects must be sent to the same address as above on or before *Wednesday, April 3, 1895*.

In awarding these prizes preference will be given to dissertations which exhibit original work, but if no dissertation is considered worthy of a prize, the award may be withheld.

Each dissertation must bear in place of its author's name some sentence or device and must be accompanied by a sealed packet bearing the same sentence or device and containing within the author's name and residence. *Any clew by which the authorship of a dissertation is made known to the committee will debar such dissertation from competition.*

Dissertations must be written in a distinct and plain hand, and their pages must be bound in book form.

All unsuccessful dissertations are deposited with the Secretary, from whom they may be obtained, with the sealed packet unopened, if called for within one year after they have been received.

By an order adopted in 1826, the Secretary was directed to publish annually the following votes:—

1. That the Board do not consider themselves as approving the doctrines contained in any of the dissertations to which premiums may be adjudged.

2. That in case of publication of a successful dissertation, the author be considered as bound to print the above vote in connection therewith.

The Boylston Medical Committee is appointed by the President and Fellows, and consists of the following physicians: ROBERT T. EDES, M.D., *President*, SAMUEL G. WEBBER, M.D., H. P. BOWDITCH, M.D., FRANK W. DRAPER, M.D., J. COLLINS WARREN, M.D., EDWARD S. WOOD, M.D., WILLIAM F. WHITNEY, M.D., *Secretary*, F. H. WILLIAMS, M.D.

The address of the *Secretary* is WILLIAM F. WHITNEY, M.D., Harvard Medical School, Boston, Mass.

DEGREES.

On Commencement Day, June 28, 1893, degrees were conferred as follows:—

M.D. and A.M.

Farrar Crane Cobb, A.B. 1890.	Edward Hamilton Kidder, A.B. 1888.
George Proctor Cogswell, A.B. 1888.	John Samuel Phelps, A.B. 1889.
Joseph Lincoln Goodale, A.B. 1889.	
Robert Worthington Hastings, A.B. (Amherst Coll.) 1888.	

M.D. (Four years' course.)

George Francis Deal.	George Seeley Smith, S.B. (St. John's Coll.) 1891.
Louis Edmonds.	John Peter Toomey.
Robert Michael Merrick.	Charles Oscar Young, A.B. (Augustana Coll.) 1888.
Winthrop Allen Risk.	
Walter Fairbanks Sawyer.	
Francis Pierce Silva.	

M.D. (Three years' course.)

Edward Stanley Abbot, A.B. 1887.	Charles Frederick Cogswell, A.B. 1889.
Frederick Herbert Baker.	Frank Clarendon Cook.
Francis Henry Barnes, A.B. (Holy Cross Coll.) 1890.	Joseph William Courtney, A.B. 1890.
George Hall Bowles, A.B. (Dartmouth Coll.) 1884.	George Hazard Crooker, A.B. (Brown Univ.).
Wendell Charles Boyd.	Richard Francis Daly.
George Washington Wales Brewster, A.B. 1889.	John Bernard Donnelly, A.B. (Holy Cross Coll.) 1890.
David Dandie Brough, A.B. (Princeton Coll.) 1888.	Edward Payson Drown, A.B. (Amherst Coll.) 1889.
Philip King Brown, A.B. 1890.	Herbert Clark Emerson, A.B. (Amherst Coll.) 1889.
Frank Fletcher Carr, A.B. (Williams Coll.) 1890.	Ammen Farenholt.
Lorenzo Chapman.	Harry Sherman Flynn.
Richard Fitz Chase, Jr.	Edward Franklin Gage, A.B. (Amherst Coll.) 1888.
Edmond Francis Cody.	
Rockwell Augustus Coffin.	

- Warren Fisher Gay, A.B. 1890.
 Frank Joseph Giblin.
 Edward Wright Groll.
 Harold Gordon Gross.
 Robert Wallace Hardon.
 George Arthur Harlow, A.B. (*Amerst Coll.*) 1889.
 Harry Hill Haskell, A.B. 1890.
 Frank Albert Higgins, S.B. (*Worcester Polytechnic Inst.*).
 Edmund Emerson Hill.
 Almon Danforth Hodges, A.B. 1889.
 Claud Perry Jones.
 William Marks Jones, A.B. 1890.
 John Elijah Loveland, A.B. (*Wesleyan Univ.*) 1889.
 Frank Lynam, A.B. (*Bowdoin Coll.*) 1889.
 George Pope MacNichol.
 Horace Sheridan Moran, A.B. (*Williams Coll.*) 1889.
 John Henry Murphy.
 Rupert Norton.
- Louis Patrick O'Donnell.
 Jay Bergen Ogden.
 Albert Kidder Page.
 Frank Piper, PH.G. (*Mass. Coll. Pharmacy*) 1889.
 James Stanton Roberts.
 Gilman Parker Robinson.
 William Henry Robinson.
 Simon James Russell, A.B. (*Holy Cross Coll.*) 1890.
 Ara Nathaniel Sargent, A.B. 1890.
 Harry Winfield Smith, A.B. (*Tufts Coll.*) 1890.
 John Lovell Sprague, Jr.
 Edwin Sturtevant Steese.
 Jerome Hilton Waterman.
 Edward Andrew Weir.
 Arthur Fitts Wheate.
 Charles James White, A.B. 1890.
 Raymond Sargent Wilder, A.B. 1889.
 Jonathan Edwards Webster.
 Francis Oliver Yost.

The following tabular view illustrates the distribution of studies throughout the year

1893-94, FROM SEPTEMBER 28 TO JUNE 22.

First Class.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	¹ Anatomy, L. Prof. Dwight, Lect. Room C.	Anatomy, L. Prof. Dwight, Lect. Room C.	Anatomy, L. Prof. Dwight, Lect. Room C.	¹ Anatomy, L. Prof. Dwight, Lect. Room C. ² Physiol. C. Lect. Room A.	Anatomy, R. Dr. Conant, Lect. Room C.	
10	¹ Hygiene, L. Dr. Harrington.	{ Histol. Laborat. Prof. Minot and Dr. Quincy.	Histology, L. Prof. Minot.	{ Histol. Laborat. Prof. Minot and Dr. Quincy.	¹ Histology, L. Prof. Minot.	Physiol. R. Prof. Bowditch, Lect. R'mA.
11	Physiology. L. Prof. Bowditch, Lect. Room A.		Physiology. L. Prof. Bowditch, Lect. Room A.		Physiology. L. Prof. Bowditch, Lect. Room A.	Physiology. L. Prof. Bowditch, Lect. Room A.
12		² Medical Chemistry, L. Prof. Hills, Lect. Room A.		² Medical Chemistry, L. Prof. Hills, Lect. Room A.		*Laborat'y.
2	*Laboratory.	² Physiology. Dem. Lect. Room A.	*Laboratory.	*Laboratory.	*Laboratory.	
3	² Bacteriology L. Asst. Prof. Ernst, Lect. Room A.	*Laboratory.				
4	*Laboratory.					
5	Applied Anat. Asst. Prof. M. H. Richardson, Lect. Room C.		Applied Anat. Asst. Prof. M. H. Richardson, Lect. Room C.		Applied Anat. Asst. Prof. M. H. Richardson, Lect. Room C.	

¹ First half-year only.

² Second half-year only.

* Anatomy, Bacteriology, Chemistry, and Physiology.

L. Lecture.

R. Recitation.

C. Conference.

Dem. Demonstration.

A. = McLean Insane Asylum; C. = Boston City Hospital; Ch. = Children's Hospital; Cl. = Clinic; D. = Boston Dispensary; E. = Eye and Ear Infirmary; L. = Lecture; Ly. = Boston Lying-in Hospital; M. = Massachusetts General Hospital; O.P.Cl. = Out Patient Clinic; R. = Recitation; S. = Samaritan Home; S.B. = So. Boston Insane Asylum; W. = Free Hospital for Women.

These abbreviations refer to the following as well as to the above tables.

During the first half-year Dr. Hill's lectures on Tuesdays and Thursdays will be in General Chemistry to conditioned men.

Second Class.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
8	†Bandaging. Drs. Scudder and C. A. Porter, No. Grove St.	†Bandaging. Drs. Scudder and C. A. Porter, No. Grove St.	†Bandaging. Drs. Scudder and C. A. Porter, No. Grove St.	†Bandaging. Drs. Scudder and C. A. Porter, No. Grove St.	†Bandaging. Drs. Scudder and C. A. Porter, No. Grove St.	†Bandaging, Drs. Scudder and C. A. Porter, N. Grove St.
9	Clin. Med. Dr. Withington, B. C. H.	‡‡ Med. Visit. Drs. Gannett & Vickery, M. G. H.	‡‡ Med. Visit. Prof. Mason & Dr. Withington, B. C. H.	Clin. Med. Dr. Vickery, M. G. H.	‡‡ Med. Visit. Drs. Gannett & Vickery, M. G. H.	‡‡ Med. V't. Prof. Mason & Dr. Withington, B. C. H.
10	‡‡Surg. Clin. Out-Patient, M. G. H., B. C. H., and Carney. ‡Surg. Dem. Dr. Mixer, No. Grove St.	‡‡Surg. Clin. M. G. H., B. C. H., and Carney. ‡Surg. Dem. Dr. Mixer, No. Grove St.	‡‡Surg. Clin. M. G. H., B. C. H., and Carney. ‡Surg. Dem. Dr. Mixer, No. Grove St.	‡‡Surg. Clin. M. G. H., B. C. H., and Carney. ‡Surg. Dem. Dr. Mixer, No. Grove St.	‡‡Surg. Clin. M. G. H., B. C. H., and Carney. ‡Surg. Dem. Dr. Mixer, No. Grove St.	Surg. R. B. C. H. and Lect. Room C. Dr. Burrell.
11	*Auscultation Drs. Gannett, V. Y. Bowditch, Jackson and Sears, M. G. H., Bost. Disp., & B. C. H.	*Auscultation	Surg. R. M. G. H. and Lect. Room C. Dr. Cabot. *Auscultation	*Auscultation	*Auscultation B. C. H. Operations.	*Auscult. M. G. H. Operations.
12	Clin. Sur. after Oct. Profs. Porter & Warren, M. G. H.	**Surg. Visit. M. G. H.	Surg. Conf. Prof. Porter, M. G. H. after Oct.	Pathology, L. Prof. Councilman, Lect. Room C.	Adv. Anat. L. Prof. Dwight, Lect. Room C.	
2	Clin. Chem. L. Prof. Wood, Lect. Room A.	Path. Histol. Prof. Councilman and Drs. Whitney & Prescott Laborat.	†Clin. Chem. L. or R. Prof. Wood, Lect. Room A. 2d term Conference.	Path. Histol. Prof. Councilman and Drs. Whitney & Prescott Laborat.		
3	Pathology. R. & Dem. Prof. Councilman, Laboratory.		Pathology, L. Prof. Councilman, Lect. Room C.		Pathology. Dem. & R. Prof. Councilman, Laboratory.	
4	Therapeut's. Dr. Harrington. Lect. Room E.	Theo. & Pr. R. Dr. Cutler, Lect. Room E. and M. G. H.	Therapeut's. Dr. Harrington. Lect. Room E.	Theo. & Pr. R. Dr. Cutler, Lect. Room E. and M. G. H.		
5	Applied Anat. Asst. Prof. M. H. Richardson, Lect. Room D.		Applied Anat. Asst. Prof. M. H. Richardson, Lect. Room D.		Applied Anat. Asst. Prof. M. H. Richardson, Lect. Room D.	

* Till February in sections.

† In first half-year.

‡ Till January in sections.

§ Examination in February.

‡‡ In second half-year in sections.

Laboratory exercises in Clin. Chem. daily except Saturdays.

The Museum will be open daily, 9-11, except Saturdays.

†† Each half of the class on alternate weeks till Feb.

** In sections of half the class till March.

‡‡ In sections.

‡‡ In second half-year.

Third Class.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Clin. Med. Prof. Shattuck. †Med. Visit. Prof. Mason.	Clin. Med. Prof. Mason, B. C. H.	Clin. Med. Prof. Shattuck, M. G. H.		Clin. Med. Prof. Mason. Clin. Otol. Jan.—March, Prof. Green.	Clin. Med. Prof. Shattuck, M. G. H.
10	**Ophthalm. Prof. Wadsworth, Feb.—April, E. & E. Inf. † Surg. Visit. Oct.—May B. C. H. 10—11.30. **Laryng. Drs. De Bois and Farlow, B. C. H. and Disp.]	Surg. Clinic. Oct.—May, B. C. H. 10—11.30. {Gynaecol. Cl. Boston Disp.}	Cl. Dermatology. Prof. White, M. G. H. **Ophthalm. Dr. Standish, **Laryngol.	Dis. of Nerv. System. Dr. Putnam, **Ophthalm. Prof. Wadsworth, **Laryngol.	Surg. Visit. B. C. H. Gynaecol. Cl. Boston Disp. till April. **Laryngol.	Theo. & Pr. Prof. Fitz, M. G. H. **Ophthalm. Dr. Standish E. & E. Inf. **Laryngol.
11		**Laryngol. Dr. Farlow, Disp.	Diseases of Children. Asst. Prof. Rotch. No. Grove St.	Otology, R. E. & E. Inf. Mar.—May. Prof. Blake.	Operations. B. C. H. Child. Dis. A't Pr. Rotch. Lect. Room B. Oct. & Mar.—June, Disp. Nov.—Mar.	Operations. M. G. H.
12	Surg. Cl. M. G. H. after Oct. Profs. Porter and Warren.	Theo. & Prac. Prof. Fitz, M. G. H. Surg. Anat. L. Mar. & Apr. Prof. Porter, Lect. Room D.	Surg. Conf. Prof. Porter. after Oct. M. G. H.	† Surg. Cl. M. G. H. Profs. Porter and Warren.	† Syphilis. Dr. Post, Oct. Lect. Room B. Nov.—Feb. Boston Disp. Surg. Anat. L. Mar. & Apr. Prof. Porter, Lect. Room D.	
2	Gynaecol. L. Prof. Baker, Lect. Room B.	**Surg. Landmarks. Dr. Monks. Feb.	*Legal Med. § Prof. Draper, Lect. Room E. **Surg. Landmarks. Dr. Monks. Feb.	**Surg. Landmarks. Dr. Monks. Feb.	*Legal Med. § Prof. Draper, Lect. Room E. **Surg. Landmarks. Dr. Monks. Feb.	
3	Th. & Pr. L. Prof. Fitz, Lect. Room E.	† Mental Dis. Dr. Fisher, Lect. Room A.	Obstetrics, L Prof. Richardson, Lect. Room B.	Th. & Pr. L. Prof. Fitz, Lect. Room E.	Obstetrics, L. Prof. Richardson,	† Ment. Dis. Clinic. Dr. Fisher.
4	Surgery, L. Prof. Warren, Lect. Room C.	Dermatology, L. Prof. White, Lect. Room B.	Surgery, L. Prof. Warren till Jan. Lect. Room C.	Surgery, L. Prof. Warren, Lect. Room C.	Clinical Conf. Profs. Shattuck and Mason, and Drs. Vickery and Jackson.	
5	Otol. L., Oct., Nov., Dec., Profs. Blake and Green. Applied Anat. M. H. Richardson. Obstet. Conf. Dr. Green, after Jan. 1.	Obstetrics, R. Dr. Green, Lect. Room E.	*Ophthalmol. L. Prof. Wadsworth, Lect. Room B. Applied Anat. Asst. Prof. M. H. Richardson, Lect. Room D.	Otol. L., Oct., Nov., Dec., Lect. Room B.	Applied Anat. Asst. Prof. M. H. Richardson, Lect. Room D.	

* During first half year.

† During second half-year.

‡ Until March 1.

§ Examination in February.

†† Each half of the class on alternate weeks.

** In sections.

The Museum will be open daily, 9—11, except Saturdays.

Fourth Class.

OCTOBER.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Dr. Monks, Surg. Clinic (10) B. C. H.	Prof. Green, Ear Diseases (6) Eye & Ear Inf. Dr. Gannett, Medical Clinic (c) M. G. H.	Dr. Cheney, Ophthalmoscopy (6) M. G. H.	Prof. Green, Ear Diseases (6) Eye & Ear Inf.	Dr. Cheney, Ophthalmoscopy (6) M. G. H.	Prof. Green, Ear Diseases (6) Eye & Ear Inf.
10	Asst. Prof. Rotch and Dr. Buckingham, Child. Dis. (c) Children's Hosp. and Dispensary.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Davenport, Women's Dis. (5) Dispensary.	Asst. Prof. Rotch and Dr. Buckingham, Child. Dis. (c) Children's Hosp. and Dispensary.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Davenport, Women's Dis. (5) Dispensary.
11	Prof. Richardson, Clin. Obstet. (8) Lying-in Hosp.	Dr. Coolidge, Laryngology (10) M. G. H. Ophthalmol. (6) Prof. Wadsworth, M. G. H.	Ophthalmol. (6) Prof. Wadsworth, B. C. H.	Dr. Coolidge, Laryngology (10) M. G. H.	Prof. Richardson, Clin. Obstet. (8) Lying-in Hosp.	Dr. Coolidge, Laryngology (10) M. G. H.
12		Dr. Cabot, Genito-Urinary Diseases (c) M. G. H.		Dr. Cabot, Genito-Urinary Diseases (c) M. G. H.		
2	Prof. Draper, Legal Med. (c) B. C. H.		Prof. Draper, Legal Med. (c) College.		Prof. Draper, Legal Med. (c) College.	
3		Prof. Baker, Women's Dis. (6) Free Hospital.		Prof. Baker, Women's Dis. (16) Free Hospital.	Dr. Ernst, Bacteriology (c) College.	
4	Asst. Prof. Bradford, Orthopedic Surg. (c) Children's Hosp.	Dr. Swift, Women's Dis. Free Hospital.	Asst. Prof. Bradford, Orthopedic Surg. (c) Children's Hosp.		Dr. Swift, Women's Dis. Free Hospital.	

NOTE.—The time at which each exercise begins is shown in the margin at the left of each page; the time of its ending is subject to the instructor's convenience.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Dr. Monks, Surg. Clinic (10) B. C. H. Prof. Rotch and Dr. Buckingham, Child. Dis. (c) Children's Hosp. and Dispensary.	Prof. Green, Ear Diseases (6) Eye & Ear Inf. Prof. White, Skin Dis. (15) M. G. H.	Dr. Cheney, Ophthalmoscopy (6) M. G. H. Dr. Davenport, Women's Dis. (5) Dispensary.	Prof. Green, Ear Diseases (6) Eye & Ear. Inf. Prof. Rotch and Dr. Buckingham, Child. Dis. (c) Children's Hosp. and Dispensary.	Dr. Cheney, Ophthalmoscopy (6) M. G. H. Prof. White, Skin Dis. (15) M. G. H.	Prof. Green, Ear Diseases (6) Eye & Ear Inf. Dr. Davenport, Women's Dis. (5) Dispensary.
10	Prof. Rotch and Dr. Buckingham, Child. Dis. (c) Children's Hosp. and Dispensary.	Prof. White, Skin Dis. (15) M. G. H.	Dr. Davenport, Women's Dis. (5) Dispensary.	Prof. Rotch and Dr. Buckingham, Child. Dis. (c) Children's Hosp. and Dispensary.	Prof. White, Skin Dis. (15) M. G. H.	Dr. Davenport, Women's Dis. (5) Dispensary.
11	Prof. Richardson, Clin. Obstet. (8) Lying-in Hosp.	Dr. Coolidge, Laryngology (10) M. G. H. Ophthalmol. (6) Prof. Wadsworth, M. G. H.	Ophthalmol. (6) Prof. Wadsworth, B. C. H.	Dr. Coolidge, Laryngology (10) M. G. H.	Prof. Richardson, Clin. Obstet. (8) Lying-in Hosp.	Dr. Coolidge, Laryngology (10) M. G. H.
12						
2	Prof. Draper, Legal Med. (c) B. C. H.		Prof. Draper, Legal Med. (c) College.		Prof. Draper, Legal Med. (c) College.	
3		Prof. Baker, Women's Dis. (6) Free Hospital.	Dr. Whitney, Pathol. Anat. (c) College.	Prof. Baker, Women's Dis. (6) Free Hospital.	Dr. Ernst, Bacteriology (c) College.	
4	Asst. Prof. Bradford, Orthopedic Surgery (c) Children's Hosp.	Dr. Swift, Women's Disp. Free Hospital.	Asst. Prof. Bradford, Orthopedic Surgery (c) Children's Hosp.		Dr. Swift, Women's Dis. Free Hospital.	

NOTE. — The numbers in parentheses indicate the maximum number of students who will be admitted to the several exercises; the membership of the sections is determined by the instructors. At the exercises marked (c) the whole class may attend together.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9	Prof. Rotch and Dr. Buckingham, Child. Dis. (c) Children's Hosp. and Dispensary. Drs. Watson and Burrell, (10) Surg. Clin. (10) B. C. H.	Prof. Green, Ear Diseases (6) Eye & Ear Inf.	Dr. Davenport, Women's Dis. (5) Dispensary. Drs. Watson and Burrell, (10) Surg. Clinic (10) City Hospital.	Prof. Green, Ear Diseases (6) Eye & Ear Inf. Prof. Rotch and Dr. Buckingham, Child. Dis. (c) Children's Hosp. and Dispensary.		Prof. Green, Ear Diseases (6) Eye & Ear Inf. Dr. Davenport, Women's Dis. (5) Dispensary.
10		Prof. White, Skin Diseases (15) M. G. H.			Prof. White, Skin Diseases (15) M. G. H.	
11		Dr. Coolidge, Laryngology (10) M. G. H. Ophthalmol. (6) Prof. Wadsworth, M. G. H.	Ophthalmol. (6) Prof. Wadsworth, B. C. H.	Dr. Coolidge, Laryngology (10) M. G. H. Dr. Watson, Genito-Urinary Diseases (6) B. C. H.		Dr. Coolidge, Laryngology (10) M. G. H. Dr. Watson, Genito-Urinary Diseases (6) B. C. H.
12						
2	Prof. Draper, Legal Med. (c) B. C. H.		Prof. Draper, Legal Med. (c) College.		Prof. Draper, Legal Med. (c) College.	
3		Prof. Baker, Women's Dis. (6) Free Hospital.	Dr. Whitney, Pathol. Anat. (c) College.	Prof. Baker, Women's Dis. (6) Free Hospital.	Dr. Ernst, Bacteriology (c) College.	
4	Asst. Prof. Bradford, Orthopedic Surgery (c) Children's Hosp.	Dr. Swift, Women's Dis. Free Hospital.	Asst. Prof. Bradford, Orthopedic Surgery (c) Children's Hosp.		Dr. Swift, Women's Dis. Free Hospital.	

JANUARY.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9		Prof. Green, Ear Diseases (6) Eye & Ear Inf.	Dr. Cheney, Ophthalmoscopy (6) M. G. H.	Prof. Green, Ear Diseases (6) Eye & Ear Inf.	Dr. Cheney, Ophthalmoscopy (6) M. G. H.	Prof. Green, Ear Diseases (6) Eye & Ear Inf.
10	Drs. Watson and Burrell, Surg. Clinic (10) City Hospital.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Swift, Women's Dis. (3) Dispensary. Drs. Watson and Burrell, Surgical Clin. (10) City Hospital.		Prof. White, Skin Diseases (15) M. G. H.	Dr. Swift, Women's Dis. (3) Dispensary.
11	Dr. Greenough, Syphilis (6) Dispensary.	Dr. Coolidge, Laryngology (10) M. G. H. Ophthalmol. (6) Prof. Wadsworth, M. G. H.	Ophthalmol. (6) Prof. Wadsworth, B. C. H.	Dr. Coolidge, Laryngology (10) M. G. H. Dr. Watson, Genito-Urinary Diseases (6) B. C. H.	Dr. Greenough, Syphilis (6) Dispensary.	Dr. Coolidge, Laryngology (10) M. G. H. Dr. Watson, Genito-Urinary Diseases (6) B. C. H.
12						
2	Prof. Draper, Legal Med. (c) B. C. H.		Prof. Draper, Legal Med. (c) College.		Prof. Draper, Legal Med. (c) College.	
3		Prof. Baker, Women's Dis. (6) Free Hospital.	Dr. Whitney, Pathol. Anat. (c) College.	Prof. Baker, Women's Dis. (6) Free Hospital.	Dr. Ernst, Bacteriology (c) College.	
4		Dr. Swift, Women's Dis. Free Hospital.	Dr. Homans, Ovar. Tumors (c) College.		Dr. Swift, Women's Dis. Free Hospital.	

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9		Prof. Blake, Ear Diseases (4) Eye & Ear Inf.	Dr. Cheney, Ophthalmoscopy (6) M. G. H.	Prof. Blake, Ear Diseases (4) Eye & Ear Inf.	Dr. Cheney, Ophthalmoscopy (6) M. G. H.	Prof. Blakc, Ear Diseases (4) Eye & Ear Inf. Dr. Walton, Nervous Dis. (6) M. G. H. Dr. Swift, Dis. of Women (3) Dispensary. Dr. DeBlois, Laryngology (10) B. C. H.
10	Drs. Watson and Burrell, Surg. Clinic (10) City Hospital.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Swift, Dis. of Women (3) Dispensary. Drs. Watson and Burrell, Surg. Clinic (10) City Hospital.	Dr. Walton, Nervous Dis. (6) M. G. H.	Prof. White, Skin Diseases (15) M. G. H.	
11	Dr. Greenough, Syphilis (6) Dispensary.	Dr. Gannett, Cardiac Dis. (c) M. G. H. Ophthalmol. (6) Prof. Wadsworth, M. G. H.	Ophthalmol. (6) Prof. Wadsworth, B. C. H.	Dr. Watson, Genito-Urinary Diseases (6) B. C. H.	Dr. Greenough, Syphilis (6) Dispensary.	Dr. Watson, Genito-Urinary Diseases (6) B. C. H.
12	Dr. Knapp, Nervous Dis. (c) City Hospital.		Dr. Knapp, Nervous Dis. (c) City Hospital.			
2	Dr. Cowles, Mental Dis. (6) McLean Hospital.		Dr. Whitney, Pathol. Anat. (c) College.			
3		Dr. Fisher, Mental Dis. (c) College. Prof. Baker, Women's Dis. (6) Free Hospital.	Dr. Durgin, Hygiene (c) College.	Prof. Baker, Women's Dis. (6) Free Hospital.	Dr. Durgin, Hygiene (c) College.	Dr. Fisher, Mental Dis. (c) Bost. Lun. Hosp.
4		Dr. Swift, Women's Dis. Free Hospital.	Dr. Homans, Ovar. Tumors (c) College.		Dr. Swift, Women's Dis. Free Hospital.	
7	Dr. C. M. Green, Operative Obstetrics (c) College.*	Dr. C. M. Green, Operative Obstetrics (c) College.*	Dr. C. M. Green, Operative Obstetrics (c) College.*	Dr. C. M. Green, Operative Obstetrics (c) College.*	Dr. C. M. Green, Operative Obstetrics (c) College.*	Dr. C. M. Green, Operative Obstetrics (c) College.*

* After February 14.

MARCH.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9		Prof. Blake, Ear Diseases (4) Eye & Ear Inf.		Prof. Blake, Ear Diseases (4) Eye & Ear Inf.	Dr. Vickery, Medical Clinic (6) M. G. H.	Prof. Blake, Ear Diseases (4) Eye & Ear Inf.
10	Drs. Watson and Burrell, (10) Surgical Clin. (10) City Hospital.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Swift, Dis. of Women (3) Dispensary. Drs. Watson and Burrell, (10) Surgical Clin. (10) City Hospital.	Dr. Walton, Nervous Dis. (6) M. G. H.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Swift, Dis. of Women (3) Dispensary. Dr. Walton, Nervous Dis. (6) M. G. H.
11	Dr. Greenough, Syphilis (6) Dispensary.	Dr. Gaunnett, Cardiac Dis. (c) M. G. H. Ophthalmol. (6) Prof. Wadsworth, M. G. H.	Ophthalmol. (6) Prof. Wadsworth, B. C. H.	Dr. Watson, Genito-Urinary Diseases (6) B. C. H.	Dr. Greenough, Syphilis (6) Dispensary.	Dr. Watson, Genito-Urinary Diseases (6) B. C. H.
12	Dr. Knapp, Nervous Dis. (c) City Hospital.		Dr. Knapp, Nervous Dis. (e) City Hospital.			
2	Dr. Cowles, Mental Dis. (6) McLean Asylum.		Dr. Whitney, Pathol. Anat. (e) College.			
3		Dr. Fisher, Mental Dis. (e) College. Prof. Baker, Women's Dis. (6) Free Hospital.	Dr. Durgin, Hygiene (e) College.	Prof. Baker, Women's Dis. (6) Free Hospital.	Dr. Durgin, Hygiene (e) College.	Dr. Fisher, Mental Dis. (e) Bost. Lun. Hosp.
4		Dr. Swift, Women's Dis. M. G. H.			Dr. Swift, Women's Dis. M. G. H.	

APRIL.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9		Prof. Blake, Ear Diseases (4) Eye & Ear Inf.	Prof. Blake, Ear Diseases (4) Eye & Ear Inf.	Prof. Blake, Ear Diseases (4) Eye & Ear Inf.	Dr. Vickery, Medical Clinic (6) M. G. H.	Prof. Blake, Ear Diseases (4) Eye & Ear Inf.
10	Vaccination. Charlton St. Dr. Durgin.	Prof. White, Skin Diseases (15) M. G. H.	Vaccination. Charlton St. Dr. Durgin.	Dr. Walton, Nervous Dis. (6) M. G. H.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Walton, Nervous Dis. (6) M. G. H.
11	Prof. Richardson, Clin. Obstet. (8) Lying-in Hosp. Dr. Gay, Surg. Visit (10) City Hospital. Dr. Greenough, Syphilis (6) Dispensary.	Dr. Gannett, Cardiac Dis. (c) M. G. H. Ophthalmol. (6) Prof. Wadsworth, M. G. H.	Dr. Gay, Surgical Visit (10) City Hospital. Ophthalmol. (6) Prof. Wadsworth, B. C. H.		Prof. Richardson, Clin. Obstet. (8) Lying-in Hosp. Dr. Greenough, Syphilis (6) Dispensary.	
12	Dr. Knapp, Nervous Dis. (c) City Hospital.	Dr. Fisher, Mental Dis. (c) College. Prof. Baker, Women's Dis. (6) Free Hospital.	Dr. Knapp, Nervous Dis. (c) City Hospital.			
2	Dr. Cowles, Mental Dis. (6) McLean Asylum.					
3			Dr. Whitney, Pathol. Anat. (c) College.	Prof. Baker, Women's Dis. (6) Free Hospital.		Dr. Fisher, Mental Dis. (c) Bost. Lun. Hosp.
4	Prof. Porter, Op. Surgery (c) College.*	Dr. Swift, Women's Dis. Free Hospital. Prof. Porter, Op. Surgery (c) College.*	Prof. Porter, Op. Surgery (c) College.*	Prof. Porter, Op. Surgery (c) College.*	Dr. Swift, Women's Dis. Free Hospital. Prof. Porter, Op. Surgery (c) College.*	Prof. Porter, Op. Surgery (c) College.*
7	Prof. Baker, Op. Gynaecol. (c) College.*	Prof. Baker, Op. Gynaecol. (c) College.*	Prof. Baker, Op. Gynaecol. (c) College.*	Prof. Baker, Op. Gynaecol. (c) College.*	Prof. Baker, Op. Gynaecol. (c) College.*	Prof. Baker, Op. Gynaecol. (c) College.*

* After April 15.

MAY.

	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.	Saturday.
9		Prof. Blake, Ear Diseases (4) Eye & Ear Inf.	Prof. Blake, Ear Diseases (4) Eye & Ear Inf.	Prof. Blake, Ear Diseases (4) Eye & Ear Inf.	Dr. Vickery, Medical Clinic (6) M. G. H.	Prof. Blake, Ear Diseases (4) Eye & Ear Inf.
10	Vaccination. Chardon St. Dr. Durgin.	Prof. White, Skin Diseases (15) M. G. H. Ophthalmol. (6) Prof. Wadsworth, M. G. H.	Ophthalmol. (6) Prof. Wadsworth, B. C. H.	Dr. Walton, Nervous Dis. (6) M. G. H.	Prof. White, Skin Diseases (15) M. G. H.	Dr. Walton, Nervous Dis. (6) M. G. H.
11	Prof. Richardson, Clin. Obstet. (8) Lying-in Hosp. Dr. Gay, Surgical Visit (10) City Hospital.	Dr. Gannett, Cardiac Dis. (c) M. G. H.	Dr. Gay, Surgical Visit (10) City Hospital.		Prof. Richardson, Clin. Obstet. (8) Lying-in Hosp.	
12	Dr. Knapp, Nervous Dis. (c) City Hospital.		Dr. Knapp, Nervous Dis. (c) City Hospital.			
3		Dr. Fisher, Mental Dis. (c) College. Prof. Baker, Women's Dis. (6) Free Hospital.	Cooking School. (c)	Prof. Baker, Women's Dis. (6) Free Hospital.	Cooking School. (c)	Dr. Fisher, Mental Dis. (c) Bost. Lun. Hosp.
4		Dr. Swift, Women's Dis. Free Hospital.			Dr. Swift, Women's Dis. Free Hospital.	

SUMMER COURSES.

During the summer of 1893, courses, chiefly clinical, were given by the instructors of the School to graduates and advanced students.

STUDENTS.

Adams, Herbert W., M.D.	Boston.
Baker, Frederick H., M.D.	Billerica.
Baldwin, Herman T., A.B.	Boston.
Blodgett, John H.	Boston.
Carvill, A. H., M.D.	Somerville.
Cavanagh, William J.	So. Boston.
Clough, Frank H.	Allston.
Cocke, James R., M.D.	Boston.
Cody, Edward F.	Taunton.
Collin, Carl O.	Boston.
Costello, John H.	Boston.
Courtney, Joseph W., A.B.	Roxbury.
Cousens, Nicholas W., M.D.	Waltham.
Enebuske, Claës J., A.M., PH.D.	Cambridge.
Eaton, Richard G., A.B.	Wakefield.
Fleet, William E., M.D.	Cambridgeport.
Fisher, J. T., M.D.	Boston.
Gage, Edward F., A.B.	Boston.
Galloupe, Benjamin F., M.D.	Hyde Park.
Galloupe, Charles W., M.D.	Boston.
Green, Haines W.	Boston.
Gunther, Elsner C., A.B.	New York, N. Y.
Harkins, Cornelius P. Jr.	Roxbury.
Hills, Frederick L., M.D.	Jamaica Plain.
Hines, Isaac B., M.D.	Boston.
Holland, A. J., M.D.	Boston.
Horne, Robert G.	Watertown.
Jenney, Arthur B., M.D.	Stoneham.
Lake, Charles N., PH.G.	Boston.
Leary, Timothy, Jr.	Waltham.
Lovewell, Henry P., A.B.	Providence, R. I.
McCollough, Edward A., A.B.	Bangor, Me.
McKenty, John E., M.D.	Waltham.

Means, Philip C.	Merrimac.
Nason, Osman C. B., M.D.	Reading.
O'Leary, Joseph A., M.D.	Wakefield.
Paine, N. Emmons, M.D.	Boston.
Richardson, Maurice H., M.D.	Boston.
Robertson, A. C., M.D.	Clifton.
Robinson, Richard F., M.D.	Cambridgeport.
Ryder, Charles E.	So. Boston.
Sampson, Charles S.	Boston.
Sargent, George B.	Lawrence.
Shea, John J.	Salem.
Smith, James F., M.D.	Westford.
Smithwick, Marsena P., A.B.	Boston.
Sherwood, Walter	Boston.
Spear, Walter M.	Rockland, Me.
Steese, Edwin S.	Brookline.
Stewart, L. A., M.D.	Wellesley.
Swan, Charles L.	Stoughton.
Tilton, Edward J. A.B.	Boston.
Thurber, Emily M., M.D.	Providence.
Tirrell, Vincent M., M.D.	So. Weymouth.
Vinal, Henry G.	Boston.
Wheaton, James L., PH.B.	Pawtucket, R. I.
Whittier, Frank N., M.D.	Brunswick, Me.
White, William H.	Somerville.
Worthington, Arthur M.	Dedham.
Yost, Francis O., M.D.	Boston.

Similar courses will be given during the summer of 1894. For particulars, address *The Secretary, Harvard Medical School, Boston, Mass.*

Subject.	Instructor.	Place.	Begins.	Ends.	Days.	Hour.	Fee.
1. Clinical Medicine	Dr. Gannett	Mass. Gen. Hosp.	July 3	Aug. 16	Mo. We. Fr.	9	20.00
2. Clinical Medicine	Dr. Gannett	Mass. Gen. Hosp.	Aug. 18	Sept. 29	Mo. We. Fr.	9	20.00
3. ² Clinical Medicine	Dr. Ernst	Mass. Gen. Hosp.	July 6	July 29	Mo. We. Sat.	11	15.00
4. ² Clinical Medicine	Dr. Ernst	Mass. Gen. Hosp.	Aug. 1	Aug. 26	Mo. We. Sat.	11	15.00
5. ¹ Clinical Medicine	Dr. Vickery	Mass. Gen. Hosp.	June 2	June 30	Tu. We. Fr.	10	15.00
6. ¹ Clinical Medicine	Dr. Prescott	Boston Dispensary	July 1	July 31	Daily.	9	20.00
7. ¹ Clinical Medicine	Dr. Prescott	Boston Dispensary	Aug. 1	Aug. 31	Daily.	9	20.00
8. Diseases of Nervous System	Dr. Putnam	Mass. Gen. Hosp.	July 3	July 31	Mo. Tu. We.	10	20.00
9. Diseases of Nervous System	Dr. Walton	Mass. Gen. Hosp.	Sept. 5	Sept. 30	Tu. Th. Sat.	10	20.00
10. Diseases of Children	Dr. Buckingham	Children's Hosp.	³ June 2	³ Aug. 31	Mo. Th. Sat.	10	20.00
11. Diseases of Children	Dr. Wentworth	Children's Hosp.	Sept. 1	Sept. 30	Daily.	10	20.00
12. ¹ Diseases of the Eye	Dr. Standish	Eye and Ear Inf.	July 1	July 29	Tu. Th. Sat.	10	20.00
13. ¹ Anatomy of the Ear	Dr. Bryant	Medical School	Aug. 2	Aug. 30	Mo. We. Fr.	2	20.00
14. Diseases of Women	Dr. Washburn	Women's Free Hos.	July 3	Aug. 10	Mo. Th.	3.30	20.00
15. Diseases of Women	Dr. Washburn	Women's Free Hos.	Aug. 14	Sept. 21	Mo. Th.	3.30	20.00
16. Diseases of Women	Dr. Haven	Boston Dispensary	July 1	Aug. 11	Mo. We. Fr.	10	20.00
17. Diseases of Women	Dr. Haven	Boston Dispensary	Aug. 14	Aug. 30	Mo. We. Fr.	10	20.00
18. Diseases of the Skin	Dr. Bowen	Mass. Gen. Hosp.	July 4	Aug. 15	Tu. Th. Fr.	10	25.00
19. Diseases of the Skin	Dr. Bowen	Mass. Gen. Hosp.	Aug. 17	Sept. 2	Tu. Th. Fr.	10	25.00
20. Clinical and Operative Surgery	Dr. Richardson	Mass. Gen. Hosp.	July 1	Aug. 12	Tu. We. Fr. Sat.	11	25.00

21. Clinical and Operative Surgery	Dr. Richardson	Mass. Gen. Hosp.	Aug. 15	Sept. 30	Tu. We. Fr. Sat.	11	25.00
22. Clinical and Operative Surgery	Dr. Mixer	Carney Hospital	July 4	July 31	Tu. Fr.	10	20.00
23. Clinical and Operative Surgery	Dr. Post	City Hospital	June 2	Aug. 29	Mo. We. Fr.	10	20.00
24. Clinical and Operative Surgery	Dr. Post	City Hospital	July 3	June 30	Mo. We. Fr.	10	20.00
25. Clinical and Operative Surgery	Dr. Burrell	City Hospital	Aug. 1	Aug. 31	Tu. Th. Sat.	11	20.00
26. Clinical and Operative Surgery	Dr. Burrell	City Hospital	Sept. 2	Sept. 30	Tu. Th. Sat.	11	20.00
27. Orthopedic Surgery	Dr. Bradford	Children's Hosp.	July 3	Aug. 30	Mo. We.	4	20.00
28. Clinical & Genito-urinary Surgery	Dr. Cabot	Mass. Gen. Hosp.	July 1	Aug. 16	Mo. We. Th. Sat.	11	25.00
29. Genito-urinary Surgery	Dr. Watson	City Hospital	June 1	June 21	Mo. We. Th. Sat.	11	20.00
30. ¹ Minor Surgery	Dr. Conant	Mass. Gen. Hosp.	July 3	July 31	Mo. We. Fr.	10	20.00
31. ¹ Minor Surgery	Dr. Conant	Mass. Gen. Hosp.	Aug. 2	Aug. 30	Mo. We. Fr.	10	20.00
32. ¹ Minor Surgery	Dr. Conant	Mass. Gen. Hosp.	Sept. 1	Sept. 29	Mo. We. Fr.	10	20.00
33. ¹ Minor Surgery	Dr. Scudder	Mass. Gen. Hosp.	July 1	July 31	Daily	10	25.00
34. ¹ Minor Surgery	Dr. Scudder	Mass. Gen. Hosp.	Sept. 1	Sept. 30	Daily	10	25.00
35. Clinical Obstetrics	Dr. Green	Lying-in Hosp.	June 1	July 31			30.00
36. Clinical Obstetrics	Dr. Green	Lying-in Hosp.	Aug. 1	Sept. 30			30.00
37. ¹ Clinical Obstetrics	Dr. Reynolds	Lying-in Hosp.	July 3	July 28	Mo. Fr.	12	15.00
38. ¹ Clinical Obstetrics	Dr. Townsend	Lying-in Hosp.	Aug. 4	Aug. 28	Mo. Fr.	12	15.00
39. Operative Obstetrics	Dr. Reynolds	Medical School	July 5	July 16	Daily	3.30	20.00

¹ Class-membership limited.² Special course on methods of precision in clinical diagnosis.³ A course is of six weeks' duration, and the class can be joined at any time before July 20.⁴ Male patients only. ⁵ Women and children.

Subject.	Instructor.	Place.	Begins.	Ends.	Days.	Hour.	Fee.
40. Operative Obstetrics	Dr. Townsend	Medical School	July 31	Aug. 12	Daily	3-30	20.00
41. ¹ Anatomy	Dr. Conant	Medical School	Aug. 16	Sept. 20	Mo. We.	4	20.00
42. ¹ Topographical Anatomy	Dr. Munro	Medical School	July 1	Aug. 15	Tu. Th. Sat.	9	20.00
43. Histology	Dr. Ames	Medical School	July 17	Aug. 16	Mo. We. Fr.	3	20.00 ⁶
44. Pathological Anatomy	Dr. Mallory	City Hospital	³ June 1	³ Aug. 31		11	20.00
45. Pathological Histology	Dr. Mallory	Medical School	³ June 1	³ Aug. 31		9	20.00
46. ¹ Bacteriology	Dr. Ernst	Medical School	July 5	Aug. 12	Daily		30.00
47. Municipal Sanitation	Dr. Durgin	Medical School	July 3	July 31	Mo. We. Fr.	3	20.00
48. Hygiene	Dr. Harrington	Medical School	July 1	Aug. 14	Daily		30.00
49. Chemistry	Dr. Hills	Medical School	June 26	July 31	Daily	10	35.00 ⁸
50. Medical Chemistry	Dr. Wentworth	Medical School	July 3	Aug. 31	Mo. Th.	2	35.00 ⁸

¹ See page 471.⁶ A small charge will be made for laboratory supplies.⁷ A satisfactory examination passed at the end of this³ See page 471. course will be accepted in place of the admission examination in Chemistry.⁸ Five dollars refunded if no apparatus is broken.

EXAMINATION PAPERS.

(*Annual Examination, 1893.*)



First Year's Studies.

ANATOMY. — Professor DWIGHT.

1. Describe the superior surface of the ethmoid.
2. What are the chief features of the posterior fossa of the skull?
3. How does the first rib differ from one of the middle ribs?
4. How to distinguish the upper and lower ends of the fibula?
5. What muscles and ligaments are attached to the tuberosity of the ischium?
6. How is the extensor communis digitorum manus inserted?
7. Origin, course, and insertion of peroneus longus.
8. What features does the posterior surface of the liver present?
9. What is the shape of the cricoid cartilage? What articulates with it?
10. What constitutes the root of the lung?
11. Origin, course, and termination of the vas deferens.
12. Where is the basilar artery? How does it arise? How does it end?
13. What veins empty into the inferior vena cava?
14. What nerves supply the larynx? Where do they arise? What is their course?
15. Origin and termination of the great splanchnic nerve.
16. Give the distribution of the anterior crural nerve.

PHYSIOLOGY. — Professor BOWDITCH.

[Number the answers to the questions without copying the questions themselves. Do not number the pages of the book. Answer the questions in order, writing on each page in succession.]

1. Why is hunger temporarily relieved by swallowing indigestible substances?
2. What is the nutritive value of alcohol?
3. To what extent may the skin act as an absorbing organ?
4. Explain the importance of the lime salts in the coagulation of the blood.
5. How may the relative proportions of the blood globules and the blood plasma be determined?

6. What are the causes of the normal variations in the rate of the heart beat?
7. Why does not the "secondary" muscular contraction throw light on the nature of voluntary contraction?
8. What is the function of the recurrent laryngeal nerve?
9. Why do dogs breathe rapidly in warm weather?
10. Why may section of a sensitive nerve cause apparent motor paralysis?
11. What is meant by cerebral localization? Illustrate.
12. What is the respiratory quotient, and what is its significance?

GENERAL CHEMISTRY. — Professor W. B. HILLS.

1. Dissolve (*a*) sodic carbonate in water; (*b*) sodic carbonate in dilute hydrochloric acid. In what respects do the two processes differ from each other? How can you show that there is a difference?
2. State the law of conservation of mass.
3. What is the unit to which molecular weights are referred?
4. Write equations illustrating the action of an acid on (*a*) a metal; (*b*) a metallic oxide; (*c*) a metallic hydrate.
5. What information does the equation $\text{CH}_4 + 2\text{O}_2 = \text{CO}_2 + 2\text{H}_2\text{O}$ give in regard to the process it represents?
6. What are the causes of the *temporary* and *permanent* hardness of water? How may the two kinds of water be made soft?
7. What are the sources of carbon dioxide? What is the amount of carbon dioxide in the atmosphere normally?
8. Describe two. $\text{H}_2\text{S O}_4$; I_2 ; P_4 .
9. Describe two. Argentic nitrate; mercuric chloride; tartar emetic. What is the chemical name of tartar emetic?
10. Color and solubility (in water) of lithic carbonate, magnesian carbonate, zincic oxide, zincic sulphate, potassic permanganate, potassic dichromate, mercuric iodide, chromic anhydride, ferric chloride, ferrous sulphate.

MEDICAL CHEMISTRY. — Professor W. B. HILLS.

1. Define the following terms, illustrating your definitions by means of chemical formulae: (*a*) homologous series; (*b*) isomerism; (*c*) amine; (*d*) amido-acid; (*e*) phenol.
2. What is the average quantity of urine passed in twenty-four hours by a healthy male adult? By a child seven years of age? How does the quantity of urine secreted during the day compare with that secreted during the night, in health?
3. What are the important chemical properties of urea? Name some of the probable antecedents of urea in the body.

4. What is the chief urinary pigment? From what is it derived? Name the intermediate substances formed in the conversion.

5, 6. (*This counts as two questions.*) Describe the nitric acid test for albumin in the urine. What precautions must be observed in performing this test? What are the possible fallacies, and how may any error arising therefrom be avoided?

7. What substances may occur, in the sediment of urine, in the form of dumb-bells? How may they be distinguished? How distinguish acid sodic urate and acid calcic phosphate?

8. Occurrence of cholesterin in the body? What are its microscopic characters?

9. What different classes of transformations are included under the general term "fermentation"?

10. What are ptomaines? To what is their formation attributed? Describe their general characteristics.

HISTOLOGY.—Professor C. S. MINOT.

[The drawings required are to be as simple as possible, and are expected to show only that the student has correctly identified the tissues and specimens.]

1. Identify the specimen. Identify, name, and draw in outline the largest cells in the preparation.

2. Identify the specimen. In what direction is the section cut? Sketch a section of a blood vessel, and name the layers forming the wall of the vessel.

3. What is the section of? Name the layers; what kind of epithelium does it show? draw the epithelium.

BACTERIOLOGY.—Assistant Professor ERNST.

[One hour.]

1. What is the object of "plate-cultures" and how are they prepared?

2. Describe method of making cover-glass preparations.

3. What is stain for gonococcus?

4. If you were tabulating the characteristics of a new microorganism, what facts would you put down?

Second Year's Studies.

MEDICAL CHEMISTRY.—Professor WOOD.

1. Mention all of the conditions which may cause a diminished quantity of urine with a low Sp. Gr. — habitually or for a considerable period of time.

2. What are the causes of an increase of uric acid? What conditions favor its separation from the urine as a sediment?

3. What changes take place in the character of the urine and sediment during the progress of a case of chronic parenchymatous nephritis?

4. What is the character of the urine and sediment in a case of chronic pyelitis? Of chronic prostatitis?

5. What inferences may be drawn from urine having the following characteristics? Why?

Slightly pale. Acid. Sp. Gr. = 1015. Slight amount of sediment.

Uph. = —. \bar{U} . = sl. —. Cl. = n. E. P. = +.

Ind. = n. \bar{U} . = n. Sf. = n. A. P. = —.

Very slight trace of albumin. Bile and sugar absent.

Sediment = excess of renal cells; few free abnormal blood globules; few hyaline and finely granular casts, mostly of small diameter, and with a few renal cells and blood globules adherent.

Total quantity of urine in 24 hours = 1970 ce.

“ “ “ urea “ = 25.728 grms.

“ “ “ chlorine “ = 8.970 “

“ “ “ P_2O_5 “ = 2.967 “

6. Given a urinary sediment containing an excess of small round cells of the same size as pus corpuscles — from what membranes may these cells come, and how determine their source in any given case?

7. What are the symptoms and post-mortem appearances in cases of corrosive sublimate poisoning?

8. Symptoms of chronic arsenic poisoning? Tests for Paris green?

PATHOLOGY AND PATHOLOGICAL ANATOMY.

Professor COUNCILMAN

1. What is the effect on the circulation of increased pericardial pressure?

2. What pathological changes are produced in the heart by narrowing or occlusion of the coronary arteries? and which coronary artery and which branch of this is most often affected?

3. Describe the changes produced in the lungs by mitral stenosis, and how these changes are produced.

4. What conditions outside of the heart may give rise to heart hypertrophy, and how do these conditions act in doing so?

5. In what way may arterial disease affect the nutrition of a part?

6. Describe an infarction of the kidney and the manner of its production.

7. What is a thrombus, and what changes may it undergo. What may be the immediate and remote effects of a thrombus?

8. To what conditions are due the swelling and heat of inflammation?

9. Given a simple gaping incision passing through the skin. How would healing take place?

10. What is the difference between parasitic and saprophytic bacteria?

11. How would you prove that the tubercle bacilli are the cause of tuberculosis?

12. Describe the structure of a miliary tubercle?

13. What is acute miliary tuberculosis and how is it produced?

14. Describe the modes of formation of a tuberculous cavity of the lungs.

15. Describe the physical conditions of a lung in the second stage of acute croupous pneumonia, and the changes to which these are due.

16. What is the character of the local lesions produced by the diphtheritic bacilli?

17. What conditions would influence you in determining the malignity of a tumor?

18. What are the general varieties of sarcomata, and from what sort of tissue do these tumors arise?

19. What is the difference between an adenoma and a carcinoma?

20. Give the reactions for amyloid. State in what organs it is most commonly found. In what portion of the kidney is amyloid most generally found?

TOPOGRAPHICAL AND ADVANCED ANATOMY.

Professor DWIGHT.

1. Describe the fissure of Rolando, its relation to the skull and the position of the motor centres near it.

2. Describe the Capsule of Tenon, the conjunctiva and the insertion of the recti muscles.

3. Describe the shape, position and relations of the thymus.

4. Describe the relations of the mastoid process externally and internally.

5. Describe the rectum, its internal features, and its relations to the sacrum and coccyx.

6. Give the relations of the parotid gland.

7. Describe the anterior wall of the abdomen.

8. Describe the anatomy of the subclavian triangle.

MATERIA MEDICA AND THERAPEUTICS.—Dr. C. HARRINGTON.

[Students of the second class will answer the first ten questions only. Two hours are allowed.

Students making up a condition will take the entire paper excepting Nos. 8, 9, and 10. They are allowed three hours.]

1. Compare the antipyretic effect of cold baths, fanning, and antipyrin.

How do we know that the fall in temperature after administration of antipyrin is not dependent on sweating?

Mention the different methods of introducing mercury and state their relative advantages.

2. What effects are produced by small and large doses of nitrite of amyl?

Compare the action of nitrite of amyl, nitrite of potassium, and nitroglycerine.

3. Action of pilocarpine. Compare with atropine.

4. A young man who has been treating himself for some weeks with a proprietary "sarsaparilla" complains of pain over the frontal sinus, sore throat, slight nausea in the morning, slight soreness of the teeth and gums, and a metallic taste. There is some coryza, the appetite is poor, the saliva somewhat increased in amount, and there is more or less acne on face and shoulders. To what may these effects be due?

A man is found in the street in an unconscious condition. The respiration is slow and stertorous, the pulse feeble and irregular, the pupils are contracted. The breath smells strongly of liquor. There is some oedema, and the urine drawn by catheter contains albumen. Discuss the possibilities as to the cause of his unconsciousness.

5. What drug may be used to modify or prevent the unpleasant effects of quinine?

In what conditions are emetics contra-indicated?

Mention the best remedy for checking the secretion of milk in an inflamed breast.

6. What dangers attend the misuse of ergot in childbirth?

In what form is acetate of potassium eliminated?

How would you administer aspidium?

7. Action of acids and of alkalies given before and after meals.

Upon what does the duration of action of drugs depend?

Advantages of sulfonal and chloralamid over chloral.

8. Name the constituents of:

Compound jalap powder.

Compound cathartic pills.

Tully's powder.

Compound infusion of senna.

Paregoric.

9. Describe (giving the chief chemical and physical properties):

Chloride of iron.

Binioidide of mercury.

Sulphate of quinine.

Iodoform.

Chloral.

What is homatropine?

What parts of the different plants do the following represent:—

Digitalis? Belladonna? Colchicum? Stramonium?

10. Write prescriptions for the following, avoiding abbreviations of officinal names, and giving directions for use:—

Castor oil.

Dover's powder.

Paregoric.

Tincture of nux vomica.

Bromide of potassium.

Compound rhubarb pills.

Reduced iron.

Cod-liver oil.

Tincture of digitalis.

Tincture of catechu.

11. How would you administer calomel for its cathartic and for its constitutional effects?
Compare the action of large doses of irritant and centric emetics.
12. How would you treat a case of poisoning by aconite?
13. Physiological action of the bromides. How avoid bromide acne?
14. In what conditions is digitalis contra-indicated, and why?
15. What action has alcohol on the temperature and on digestion?
What influence, if any, has the habitual use of alcohol on the chances of recovery from acute disease and surgical operations?
16. What is the value of iodoform as an antiseptic?
Should iron be given in small or large doses, and why?
17. Give instances of different and even opposite effects of drugs in large and small doses.

Third Year's Studies.

OBSTETRICS. — Professor W. L. RICHARDSON.

1. How is the nutrition of the foetus maintained before the formation of the placenta?
2. What is the origin and significance of a caput succedaneum? If present, where would it be found in a head presentation — O. D. P.?
3. Mechanism and treatment of a face presentation — M. D. P.?
4. Causes and treatment of post-partum haemorrhage?
5. In a labor with twins the first child has just been born. Describe in detail your duties from that moment until the end of the third stage of labor.
6. A multipara, eight months advanced in pregnancy, sends for you on account of the sudden onset of moderate haemorrhage, which has ceased before your arrival. Labor is not present. Diagnosis, prognosis, and treatment.
7. A multipara early in labor presents the occiput left anterior. Six hours later, after an enforced absence, you find the head in the pelvis, position still left anterior, the brow presenting, the patient exhausted. Discuss the treatment.
8. How do axis-traction forceps differ from other forceps? In what class of cases are they of especial value?
9. Symptoms and treatment of puerperal septicaemia.
10. Give in detail the method of using antiseptics in obstetric practice.

SURGERY. — Professor CHEEVER.

- I. *Simple fracture of the femur.*
 - a. In its upper third.
 - b. In the middle.
 - c. In its lower third.
 - d. Symptoms and treatment of each, separately.

- II. *Repair of bone.*
 a. Describe the callus.
 b. Length of time for union.
 c. Pseudarthrosis.
 d. Treatment of non-union.
- III. *Scalp-wounds.*
 a. Describe all their consequences.
 b. Treatment to prevent these consequences.
 c. Treatment of the consequences.
- IV. *Surgical tuberculosis.*
 a. Varieties.
 b. General course of the disease in bone.
 c. Prognosis and principles of treatment.
- V. *Haemorrhage in Spinal Canal.*
 a. Symptoms.
 b. Treatment.
 c. Results.
- VI. *Erysipelas.*
 a. Etiology.
 b. Symptoms.
 c. Curative influence of.
 d. Treatment.
- VII.
 a. The hysterical knee.
 b. The rheumatic knee.
 c. The tuberculous knee.
 d. Diagnosis of each.
- VIII. *Surgical fevers.*
 a. Varieties.
 b. Etiology.
- IX. *The tongue.*
 a. Dyspeptic ulcers.
 b. Gummata.
 c. Chancres.
 d. Cancer.
 Diagnosis and treatment of each.
- X. *The rectum.*
 a. Forms of fistula.
 b. Causes.
 c. Symptoms.
 d. Treatment.

CLINICAL SURGERY.—Professor PORTER.

CASE I.

Mrs. B., a single woman, age thirty-five years, thin, spare, but wiry and healthy, presents family history of no importance.

Personal history.—The patient gave no history of previous sickness, save children's diseases. She had a small lump in her right breast. The "lump" didn't pain her. According to her account this lump first made its appearance five years ago. She was then thirty years old. It was

very small. It did not trouble her, and for three years it scarcely grew at all. Two years ago (her age thirty-three) it began to grow more perceptibly. She also noticed then for the first time a slight, thin, blood-colored discharge from the nipple. It was never much. One year ago this discharge turned to a clear, thin, yellow fluid, still scant, with continuance to date. During the last six months the "lump" had grown much faster than at any time before. It was this sudden growth which brought her to seek advice. She never had had any abscess of the breast, or previous local affection,—no blow or other trauma. She could give no cause save that as she went about doing her house-work she had often done "considerable reaching up high" with her right arm. She had not lost any flesh—usual weight, 120–130 pounds. She called herself as well as usual, save that of late on getting nervously tired she experienced "dull pain" in the vicinity of the lump.

Examination.—A woman who hardly looked thirty-five years old. Ribs easily counted, yet apparently well developed and nourished. Her breasts were small, the right slightly larger than the left. In the external portion of the right mamma, on a level with the nipple, was felt a small, rather hard and nodular lump, which measured two and a half inches horizontally by two inches vertically. It was adherent neither to skin nor chest wall, freely moved with the gland; not painful, not tender. The tumor was apparently not diffuse, but had a contour pretty well defined. There was an interval of an inch to an inch and a half between its inner border and the nipple. The nipple was not retracted. The skin over the tumor was neither tense and shining nor dimpled and "pig-skin" like in appearance.

Glands.—No enlarged glands were made out, though it was perceived that the right axillary glands were tender. By squeezing the right nipple a drop of thin, clear, serous fluid was forced out. The tumor and its nodules seemed equal in consistency throughout. There was no sense of elasticity; none of fluctuation. The rest of the chest, including the left breast, seemed normal.

I. What is the nature of the disease?

What is the probable course?

What the treatment; if operative, how extensive.

Prognosis.

II. What conditions are there which produce an enlargement of one or both sides of the scrotum in the upright position which disappear in the recumbent posture?

Name them and give the symptoms by which they can be distinguished from each other.

III. How would you treat a compound comminuted fracture of the patella. Give details.

What complications can arise before convalescence is established? And how would you treat them?

THEORY AND PRACTICE.—Professor FITZ.

1. Discriminate between chlorosis and anaemia, and give the differential diagnosis.

2. The treatment of acute, articular rheumatism, including the indications for the use of the various remedies and the limitations to their value.

3. Discriminate between the ataxic and pre-ataxic stages of locomotor ataxia.
4. The indications for thoracentesis and describe the operation.
5. The prognosis, general and particular, and the treatment, of acute fibrinous pneumonia.
6. The etiology, symptomatology, diagnosis, and treatment of suppurative hepatitis.
7. The diagnosis and treatment of incarcerated gall-stones.
8. The diagnosis, prognosis, and treatment of acute nephritis.
9. The etiology and differential diagnosis of palpable enlargement of the kidney.
10. The etiology, prognosis, and treatment of chronic diarrhoea.

CLINICAL MEDICINE. — Professor SHATTUCK.

[Give the differential diagnosis, the prognosis, and the treatment of as many of these cases as the time will allow, discussing them in the order in which they are arranged. Assume that symptoms not mentioned are wanting; but as omissions, intentional or not, may occur, state them if essential. Success will depend more upon the quality than upon the quantity of the work. The intelligent discussion of the cases will have more weight than a hasty and inconclusive though correct diagnosis.]

CASE 1. — A female domestic, 29 years old, single, lost her father, a dissipated man, from phthisis. Her family history is otherwise negative. She herself has never been very strong, was chlorotic for a time five years ago, but has never had any serious illness. A year ago, before coming to this country, she took a very severe cold, and a few days thereafter experienced a sudden and intense pain in the left lower axillary region. This pain was accompanied and followed by cough, with little or no expectoration. She was not long laid up, but has been short of breath on exertion ever since. She denies persistent cough, and states that it is present only when she takes cold; expectoration at these times is scanty, but several times has been blood streaked. She thinks she has lost no flesh and has not been feverish. She has been and is now continually employed. Sometimes when she makes certain motions she hears a queer noise under her left breast. Her employer sends her to be looked at while the physician is visiting a member of the family.

The general appearance is that of health. The pulse and temperature are normal. She complains only of shortness of breath, especially when mounting stairs, dry cough, and inappetence. The chest is well formed and symmetrical; the interspaces are equally defined on the two sides; no cardiac impulse is visible; the left chest dilated less than the right on full inspiration. The heart sounds are loudest, and the impulse can be best felt, just below the ensiform cartilage; the sounds are normal. The cardiac dulness seems to extend farther than usual to the right of the sternum. The right chest is hyperresonant throughout with puerile respiration. Percussion is tympanitic all over the left chest, including the cardiac area, with very feeble respiration and absence of vocal fremitus. In the left lower axilla and under the breast there is faint amphoric breathing and whisper, with occasional metallic tinkle.

Diagnosis? Prognosis? Treatment?

CASE 2. — Feb. 16 a married lady of thirty is seen in consultation. During the eight years of her married life she has had four children, the youngest four months old. After her second confinement had puerperal septicaemia, and the catheter was used for some time. Cystitis apparently followed as irrigation of the bladder was practiced. Vesical symptoms were troublesome after this, and five separate times she underwent prolonged treatment under an eminent gynaecologist. Finally, discouraged by the persistence of her symptoms, she resorted to the "mind cure," with marked relief. During her last pregnancy she was unusually well and her confinement was easy, but was followed by a return of vesical symptoms. For the last five or six weeks she has suffered from more or less indigestion, and has had frequent watery stools preceded by abdominal pain. January 23d she came to Boston, hoping to be benefitted by the change; and, acting on the advice of her "mind cure" friend, shopped, went to the theatre, and was generally very active. During this treatment she eat scarcely anything, and at the end of five days returned home. The next day vomiting appeared, and by Feb. 1st, when she called her physician, the stomach retained nothing. The vomiting ceased within two days, and has not since recurred. The bowels have continued loose, moving two to five times daily without notable pain. For two weeks there has been some cough, with little or no expectoration. Since her physician was called pyrexia has been constant, as a rule higher at night, though sometimes higher in the morning, ranging broadly between 101° and 104° . The pulse has ranged between 110 and 140. No delirium.

The hands are cold and clammy, the color of the face is good, the eye bright, the mind clear, the knee jerks lively. The chest and abdomen are negative except that some medium rales are heard at both bases, and there is some tenderness along the colon and in both flanks. The urine is said to be negative. It is stated that she is a very reticent person, and has never been known to be hysterical.

Diagnosis? Prognosis? Treatment?

CASE 3. — A rather nervous gentleman, 43 years old, both of whose parents died of cancer, married about a year before his present illness began. About the same time he moved from the city to the country, and became quite active out doors, with benefit to his appetite and general health. The winter snows, however, forced him to be more sedentary. When first seen in consultation with the family physician, who had been called only four days before, he complained of obstinate constipation. For six weeks he had had darting pains in the lower abdomen, worse at night, but relieved by walking. For two weeks he had been constipated. The physician had first prescribed a mild laxative pill, which caused some griping but no dejection. The next night he sat bending forward in pain most of the night, getting relief from an hypodermic of one quarter grain of morphia, twice repeated. At that time the bowels were soft, except for resistance corresponding to the ascending, and particularly the transverse, colon. The next night he had an ounce each of glycerine and castor oil, but was rather worse the following day. Some flatus escaped on the day of the consultation, but no faecal matter had come away for at least four days. The temperature had remained normal. There was no vomiting.

Physical examination showed a spare man of middle age with a somewhat anxious face. Rectal examination was negative. The abdomen was distended with gas and somewhat tense, but nowhere especially tender.

When the patient's attention was diverted the same resistance could be felt which has been already described. The pulse was not remarkable at first. After the examination was concluded, however, it became much more rapid and feeble, but improved again after a little brandy.

Diagnosis? Prognosis? Treatment?

DISEASES OF CHILDREN. — Professor ROTCH.

- I. Describe a case of chorea and give the treatment.
- II. State the common causes of vulvo-vaginitis in little girls.
- III. The diagnosis of varicella.
- IV. What are the causes of the cerebral palsies of young children?
- V. Give the differential diagnosis between a dilated heart and a pericardial effusion in a child 4 years old.

GYNAECOLOGY. — Professor BAKER.

1. Give the origin and insertion of the levator ani muscle.
2. In taking a history of a gynaecological case what points would you wish to bring out by your questions?
3. In an uncomplicated case of retroversion of the uterus what are the rational signs you would find present?
4. In any instrumentation of the uterus what precautions should be taken, both on the part of the patient, the surgeon and his instruments?
5. What do you understand by sundering of the perineum, and what are the results that are likely to follow this injury?

DISEASES OF THE NERVOUS SYSTEM. — Professor PUTNAM.

N. B. — Thorough discussion of a few of the questions will be preferred to superficial discussion of the whole number.

1. Give the diseases or pathological conditions which might cause paralysis of the abducens nerve, and the means of establishing the diagnosis of each one.
2. Give the same with regard to paralysis of the facial nerve, and with regard to atrophy of the optics.
3. Give the diseases of the nervous system that follow diphtheria, typhoid, measles, scarlet-fever, influenza, syphilis; indicating, so far as possible, the manner in which the changes are brought about.
4. Give the different causes of neuralgia in the areas supplied by the various nerves of the face, the brachial plexus, the abdominal nerves (superficial and visceral), the sciatics (one and both sides); together with the prognosis and treatment in each case.

5. Indicate the possible diagnosis in the following cases, and the information needed for differentiating between them:—

(a) A child six years old, a girl, has a severe fall, striking the head but not causing fracture. Three months later she begins to complain of headache, and soon the gait becomes staggering, and she vomits frequently without apparent cause. She does not answer questions satisfactorily, but her mother feels sure that she has not lost her eyesight.

(b) A man of between thirty and forty, of good circumstances, but who has been rather a free liver, has a slight attack of aphasia with right hemiplegia, both of which pass away in the course of two months. Examination of the eyes shows a number of small retinal hemorrhages. The second aortic sound of the heart is accentuated. The urine sometimes contained a faint trace of albumen, sometimes none.

(c) A middle-aged man, who has led a rather dissolute life, comes for examination on account of two epileptiform attacks which he has had within the past year. His knee-jerks are somewhat exaggerated.

Fourth Year's Studies.

OPHTHALMOLOGY. — Professor WADSWORTH.

1. Ophthalmia Neonatorum.
2. Interstitial Keratitis.
3. Hypermetropia and Presbyopia.
4. Symptoms of paralysis of the third nerve.
5. How would you examine a case of blindness to determine the situation of the lesion?
6. Symptoms and appearance in atrophy of the optic nerve.

DISEASES OF CHILDREN. — Professor ROTCH.

1. Describe a case of Varicella. From what diseases is it to be distinguished, and how?
2. Describe a case of measles. Give the differential diagnosis.
3. Mention the possible causes of percussion dullness in the chest of a young infant.
4. State the common causes of vulvo-vaginitis in little girls.
5. What are the characteristics of the teeth in syphilitic children?
6. How would you treat chorea?

GYNAECOLOGY. — Professor BAKER.

1. Give the anatomy of the vagina.
2. Give the location of Skene's ducts and state their significance.
3. What are the structural changes that result from laceration of the cervix uteri, and how soon after this accident are they likely to be manifested?

4. State the dangers, both immediate and remote, in a case of septic endometritis.

5. Give the landmarks for denudation in the secondary operation for laceration of the perineum.

6. Given a tumor the size of a duck's egg occupying the left retro-uterine space, adherent, sensitive to the touch, and not immediately connected with the uterus; also giving the history of repeated attacks of pelvic peritonitis with the pain referable to said locality. What would be the probable diagnosis of the character of the mass, and what means would you resort to in your physical examination to perfect the diagnosis?

DERMATOLOGY. — Professor WHITE.

1. Pityriasis maculata et circinata.
 2. Treatment of Acne.
 3. Pigment affections.
 4. Etiology of Alopecia.
 5. Scabies.
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OTOLOGY. — Professors BLAKE and J. O. GREEN.

1. Give the course of the facial nerve through the temporal bone from its entrance at the porus acusticus internus to its exit.

2. What is the origin, course through the middle ear, distribution, and function of the chorda tympani nerve.

3. Give some of the common diseases and their treatment.

4. Describe the course and symptoms of a simple acute inflammation of the middle ear in an adult, and give the treatment appropriate to the conditions which you describe.

5. Give the more common forms of syphilitic disease of the ear.

6. Describe a case of Othaematoma of the auricle and suggest the appropriate treatment.

7. Describe a case of acute inflammation within the mastoid process, and outline the treatment possibly necessary.

LARYNGOLOGY. — Dr. A. COOLIDGE, Jr.

1. Give a short clinical history of a case of peritonsillar abscess.

2. The differential diagnosis between secondary and late syphilis of the Pharynx.

3. Draw and describe the normal Larynx as seen in the laryngeal mirror.

4. The diagnosis and treatment of tubercular laryngitis.

5. Mention the more common causes of obstruction to nasal breathing. (a) unilateral; (b) bilateral.

6. The diagnosis, prognosis, and treatment of atrophic thinitis.

CLINICAL OBSTETRICS. — Professor W. L. RICHARDSON.

1. What is the significance of a chill occurring immediately after delivery? Of a chill occurring during the morning of the seventh day of a normal convalescence?

2. A normal labor is followed by a normal convalescence. During the fourth week of the convalescence the baby suddenly dies. How would you treat the breasts?

3. During labor the perineum is ruptured. Three stitches are taken. On the eighth day of the convalescence an examination shows that the middle stitch has given way, and a small fistulous opening admits easily the passage of a probe between the first and third stitch. Treatment?

4. When are vaginal injections and when are intra-uterine injections to be used during the puerperal convalescence? Describe in detail how the latter are to be given.

5. A secundipara has inverted nipples, which can be everted only with difficulty. She had a mammary abscess while trying to nurse her first child. How would you deal with the case?

6. Does the occurrence of phlegmasia dolens during convalescence endanger life? If so, in what way? Treatment?

OPERATIVE OBSTETRICS. — Professor W. L. RICHARDSON.

1. State the operative treatment for high arrest of the face.

2. A young primipara is first seen after two hours of good second stage labor. The head is engaged in the superior strait, O. L. A. The membranes are ruptured, and there are symptoms demanding immediate delivery. The pelvis is found to be slightly contracted in all its diameters. Treatment?

3. A multipara has been in labor two days. The membranes have long since ruptured, and a contraction ring is felt four inches above the symphysis pubis. The os is fully dilated. The position is Sc. L. A. The right hand hangs without the vulva. The foetal heart has not been heard for three hours. Treatment?

4. A primipara at full term has been in labor twelve hours. The os is dilated to the size of a dollar. The membranes are unruptured. The head, not yet engaged, and somewhat extended, presents with the occiput right posterior. Immediate delivery is indicated in the interest of the child. Describe in detail the treatment of the case.

OPERATIVE SURGERY. — Professor PORTER.

1. What are the rules for the ligature of the common carotid artery at the point of election?

2. What, for the ligature of the brachial at the bend of the elbow?

3. What, for the femoral at Hunter's canal?

4. What, for the posterior tibial high?

5. What, for excision of the upper jaw?

6. What, for excision of the head of the humerus?
 7. What, for amputation of penis?
 8. What, for amputation of leg at point of election?
 9. What, for Pirogoff's amputation?
 10. What, for rectal puncture of the bladder?
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LEGAL MEDICINE. — Professor DRAPER.

1. If one finds in the mouth of an infant the lower central incisor teeth and these only, what age does this degree of dentition indicate under normal conditions.

2. What excuses a physician from court when he has been regularly summoned?

3. Upon the discovery of an adult skeleton of doubtful identity, what characteristics does the medical examiner find about the pelvis to enable him to state that it is that of a woman?

4. What is the ordinary rate of cooling of a dead human body, stated in degrees of the Fahrenheit scale; and what conditions favor rapid cooling?

5. In the medical proof of the rape of a virgin, is evidence required of a laceration of the hymen in order to convict of the crime?

6. Make a formal report of an autopsy in a case of death by drowning.

BACTERIOLOGY. — Assistant Professor ERNST.

1. What are the methods by which the bacteria produce their effects?

2. What are the aniline dyes, and why are they useful in the observation of bacteria?

3. Describe the method of preparation of cover-glasses for bacteriological observation.

4. How would you stain a cover-glass preparation for demonstrating the presence of the bacillus of tuberculosis?

MENTAL DISEASES. — Dr. FISHER.

1. What are the characteristics of idiocy, imbecility, and dementia?

2. Name the varieties of impulsive insanity.

3. Describe *folie circulaire*.

4. Difference between the hysterical and the epileptic seizure.

5. Give the varieties of melancholia.

6. Give the four stages of evolution and possible results in a case of ordinary insanity.

7. What is paranoia?

8. Give the stages of development, differential diagnosis, and pathology of general paralysis.

ADMISSION EXAMINATION PAPERS.

LATIN.

(One hour.)

(Candidates will translate one of the following extracts.)

1. Successit Romulo Numa Pompilius, vir inclyta iustitia et religione. Is Curibus oppido Sabinorum accitus est. Qui cum Romam venisset, ut populum ferum religione mitigaret, sacra plurima instituit. Aram Vestae consecravit, et ignem in ara perpetuo alendum virginibus dedit. Flaminem Iovis Sacerdotem creavit, eumque insigni veste et curuli sella ornavit. Duodecim Salios Martis sacerdotes legit, qui ancilia, imperii pignora, ferre per urbem canentes et rite saltantes solebant. Annum in duodecim menses ad cursum lunae descripsit; nefastos fastosque dies fecit; portas Iano gemino aedificavit, ut esset index pacis et belli: nam apertus in armis esse civitatem, clausus vero pacatos omnes circa populos significabat.

2. Flumen est Arar, quod per fines Aeduarum et Sequanorum in Rhodanum influit incredibili lenitate, ita ut oculis in utram partem fluat iudicari non possit. Id Helvetii ratibus ac lintribus iunctis transibant. Ubi per exploratores Caesar certior factus est tres iam copiarum partes Helvetios id flumen transduxisse, quartam vero partem citra flumen Ararim reliquam esse, de tertia vigilia cum legionibus tribus e castris profectus ad eam partem pervenit quae nondum flumen transierat. Eos impeditos et inopinantes adgressus magnam partem eorum concidit: reliqui fugae sese mandarunt atque in proximas silvas abdiderunt. Is pagus appellabatur Tigurinus; nam omnis civitas Helvetia in quattuor pagos divisa est. Hic pagus unus, cum domo exisset, patrum nostrorum memoria L. Cassium consulem interfecerat et eius exercitum sub iugum miserat.

ENGLISH.

I. Spell 20 words.

- | | | |
|---------------|-------------------|----------------|
| 1. Relief. | 8. Field. | 15. Canal. |
| 2. Believe. | 9. Genius. | 16. Lawful. |
| 3. Imperious. | 10. Unbalanced. | 17. Lawyer. |
| 4. Surpass. | 11. League. | 18. Physician. |
| 5. Organize. | 12. Intermediate. | 19. Season. |
| 6. Clash. | 13. Foreclosure. | 20. Tutor. |
| 7. Divide. | 14. Contribute. | |

II. Dictation — 10 lines.

III. Write a short autobiography.

PHYSICS.

1. What is a molecule? Give examples of a simple and a compound molecule.
2. Prove that two bodies of unequal mass attract each other equally.
3. Endosmose; Exosmose.
4. Define density; specific gravity.

5. What is the unit of heat? How many units of heat are required to melt one kilogram of ice, and how is the heat expended?
6. What is meant by the strength of an electric current? How may it be measured?
7. When the stem of a tuning-fork in vibration is placed against the top of a table is the sound increased or diminished? Why?
8. What is a virtual, and what a real (actual) image?

CHEMISTRY.

1. How long have you studied chemistry? Where? What courses have you taken? What books have you used?
2. What is the difference between a physical and a chemical change? Illustrate your definition by examples.
3. What is the unit to which molecular weights are referred?
4. What information does the equation $Zn + H_2SO_4 = ZnSO_4 + H_2$ give in regard to the process it represents?
5. Describe (a) chlorine; (b) iodine.
6. Give the common names of the two chlorides of mercury. In what respects do they differ from each other?
7. Give the group reagents for the metals in the order in which they are applied in qualitative analysis.
8. Given a colorless solution, HCl gives no precipitate, but H_2S added to the acid solution gives a bright yellow precipitate soluble in alkaline hydrates. $AgNO_3$ added to the solution gives a white precipitate, which soon becomes violet, soluble in NH_4OH , insoluble in HNO_3 . Name the substances present.

$$H = 1, \quad O = 16, \quad S = 32, \quad Zn = 65.$$

FRENCH.

I. TRANSLATE:—

Je passe donc mes jours loin des hommes, que j'ai voulu servir et qui m'ont persécuté. Après avoir parcouru une grande partie de l'Europe, je me suis fixé dans cette île peu habitée, séduit par sa douce température et par ses solitudes. Une cabane que j'ai bâtie dans la forêt, au pied d'un arbre, une rivière qui coule devant ma porte, suffisent à mes besoins et à mes plaisirs.

Je joins à ces jouissances celles de quelques bons livres, qui m'apprennent à devenir meilleur. Ils font encore servir à mon bonheur le monde même que j'ai quitté. Ils me présentent des tableaux des passions qui en rendent les habitants si misérables, et, par la comparaison que je fais de leur sort au mien, ils me font jouir d'un bonheur négatif.

Depuis que les hommes ne sont plus sur mon chemin et que je ne suis plus sur le leur, je ne les hais plus, je les plains. Si je rencontre quelque

infortuné, je tâche de venir à son secours par mes conseils. Mais je n'ai guère trouvé que l'innocence attentive à ma voix. La nature appelle en vain à elle le reste des hommes; chacun d'eux se fait d'elle une image qu'il revêt de ses propres passions. Il poursuit toute sa vie ce vain fantôme qui l'égaré et il se plaint ensuite au ciel de l'erreur qu'il s'est formée lui-même.

II. Write a short description in French of some familiar place or object.

GERMAN.

Ein armer Sklave, der aus dem Hause seines Herrn entflohen war, wurde zum Tode verurtheilt. Man führte ihn auf einen grossen Platz, welcher mit einer Mauer umgeben war, und liess einen furchtbaren Löwen auf ihn los. Tausende von Menschen waren Zeugen dieses Schauspiels. Der Löwe sprang grimmig¹ auf den armen Menschen; aber plötzlich blieb er stehen, wedelte² mit dem Schweife, hüpfte voll Freude um ihn herum und leckte ihm freundlich die Hände. Jedermann verwunderte sich und fragte den Sklaven wie das komme.

Der Sklave erzählte Folgendes: "Als ich meinem Herrn entlaufen war, verbarg ich mich in einer Höhle³ mitten in einer Wüste.⁴ Dann kam auf einmal dieser Löwe herein, winselte⁵ und zeigte mir seine Tatze,⁶ in welcher ein grosser Dorn steck. Ich zog ihm den Dorn heraus, und von der Zeit an versorgte mich der Löwe mit Wildpret,⁷ und wir lebten in der Höhle friedlich beisammen. Bei der letzten Jagd wurden wir gefangen und von einander getrennt.⁸ Nun freut sich das gute Thier, mich wieder gefunden zu haben."

¹ furiously. ² wagged. ³ cave. ⁴ desert. ⁵ whined. ⁶ paw. ⁷ game. ⁸ separated.

ALGEBRA.

(Reduce to simplest terms and leave all the work.)

1. It is required to divide \$300 among A, B, and C, so that B and C may each have twice as much as A. How many dollars will each have?
2. What is the sum of bx , abx , and $2cx$?
3. Subtract $8a + 4b - 5c - 2x$ from $-6a - 4b - 12c + 12x$.
4. Multiply $(a + b)^2$ by $(a + b)$.
5. Develop $(a + b + c)(a - b - c)$.
6. Divide $12a^3b + 24a^3c - 36ab$ by $12a$.
7. Divide $a^3 + x^3$ by $a + x$.
8. Find the greatest common divisor of $15a^3b^2c^2$ and $12a^3bc^3x$.
9. Add $\frac{x-a}{x^2-ax+a^2}$ and $\frac{1}{x+a}$.
10. The wages of 5 men and 7 women amount to \$16.40, and 7 men receive more than 6 women by \$4. What does each receive?

GEOMETRY.

(Leave all the work.)

I. Define a square, a rhomboid, an isosceles triangle.

II. Two right triangles are equal when the hypotenuse and an acute angle of one are equal respectively to the hypotenuse and an acute angle of the other.

III. The sum of three angles of a triangle is equal to two right angles.

IV. The diagonal of a parallelogram divides the figure into two equal triangles.

V. In the same circle or equal circles, equal arcs are subtended by equal chords.

BOTANY.

1. Name and describe the parts of a complete flower.

2. Describe the phenomena of germination in a bean or grain of corn.

3. Describe the fertilization of any flower and the changes which follow.

4. Make a sketch of a thrice pinnate leaf.

5. Explain the structure, growth, and function of an endogenous stem.

6. Mention some of the important plants of the following orders: Solanaceae, Leguminosae, Caryophyllaceae, Vitaceae, Cupuliforae.

